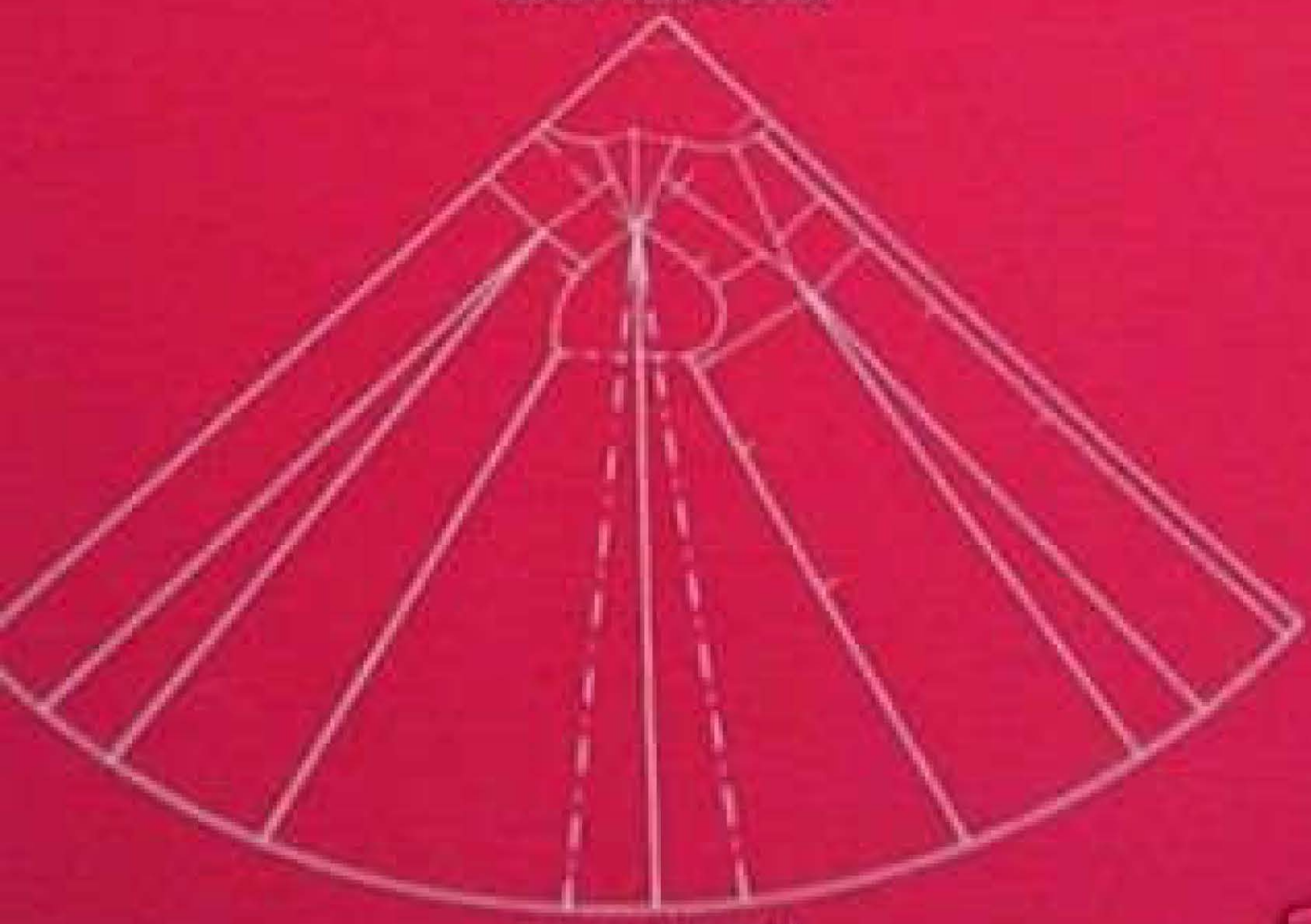
DRESS PATTERN DESIGNING

THE BASIC PRINCIPLES OF CUT AND FIT

NATALIE BRAY

WITH FASHION SUPPLEMENT BY
ANN HAGGAR



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The Basic Principles of Cut and Fit

NATALIE BRAY

Former Principal of The Katinka School of Dress Designing, London

FIFTH EDITION

With Fashion Supplement
and illustrations
by Ann Haggar

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BIOGRAPHICAL NOTE

Natalie Bray was born in Russia, the daughter of a naval officer, but left the country at the time of the Russian Revolution. She trained as a musician, married an Englishman and became a qualified engineer. She first became interested in technical dressmaking in 1926 when she was asked to help in the management of a business called Katinka – Court Dressmakers, started several years earlier by a member of her family. She went to Paris for a year to learn cutting and in 1927 she obtained the Diploma of the Academie de Coupe de Paris. She then worked for three leading Parisian model houses including Lucien Lelong. Having returned to London, she worked at Katinka but in 1928 decided to start teaching classes as well. At first these were run on the same lines as those she attended in Paris – dealing only with modelling patterns on the dress stand and practical dressmaking. She soon became interested in working out a *simple, quicker and more exact* method of cutting patterns on the flat, which would be based on and could therefore be tested by results obtained by modelling. By 1935 she had evolved her own system of flat pattern cutting, and this method has been taught with various improvements and fashion modifications ever since. The techniques she pioneered and perfected revolutionised dress pattern designing, assisting the rise of the modern fashion industry. Her teaching has had a profound influence on design, production and education. Her works are classics: fashions change but the principles of cutting the flat pattern do not. They remain essential reference books for all students, teachers and practising cutters.

INTRODUCTORY

This book follows very closely a course of lessons given over many years at the Katinka School of Dress Designing, a course dealing mainly with the fundamental principles of Cut and Fit on which is based all pattern construction, even the most advanced and modern.

From this basic course, under the influence of ever-changing fashion, developed the technique of advanced pattern designing practised at the school.

It may, therefore, be useful to say a few words about the origin and development of the methods described in this book, methods which are the result of many years of research and experimenting with patterns, carried out through many changes of line and fashion.

Originally the Katinka School methods of pattern cutting on the flat were based directly on results obtained by *modelling* patterns on the figure or the dress stand. Thus, draping on the figure, or French Modelling (moulage) as it is sometimes called, lies at the root of the whole basic idea that every type of pattern, from the simplest to the most elaborate, can be evolved quite correctly *on the flat* from a foundation representing the figure, provided certain *important principles, discovered through direct modelling*, are never lost sight of in the process.

The method can therefore be described as 'modelling on the flat', the part of the dress stand being taken by a foundation pattern (or 'block') of advanced shape and of considerable adaptability.

As these methods originated from direct modelling, they were from the very beginning based on the recognition of several important facts clearly demonstrated by modelling. Perhaps the most important of these is the fact that since the figure is three dimensional, a garment must also be constructed in three dimensions, i.e. it must be *thought of* as having length, width and depth. In this way the *shape* of the figure and its circumferential size, rather than a non-existent *flat* size, become the basis for the construction of a pattern, even though the pattern itself is still worked out on a flat piece of paper, i.e. in two dimensions only.

It was always considered essential that students should be made aware of this important fact from a very early stage, that they should be taught to recognize its significance in relation to good fit, and be trained to visualize the fit of a garment on the three-dimensional figure, with all its curves and hollows, while actually working in only two dimensions.

Once this mental adjustment has been achieved, progress in learning pattern designing is usually much more rapid, and it is not necessary to have years of fitting experience in order to learn *to see* what one is aiming at, i.e. to have a clear mental picture of the shape, line and fit of the style on the figure, while still at the stage of cutting the pattern.

What this means in terms of added confidence, foresight, good judgement and speed, every cutter of experience knows only too well. Yet with some drafting systems involving numerous abstract deductions and complicated calculations, to think ahead of the *result*, i.e. of the finished garment *on the figure*, is no easy matter, particularly for an inexperienced cutter. While concentrating on mastering the system (and this may take a considerable time), he can hardly think of anything else, let alone *control in advance* the line and fit of the style on the figure: this has to be left to the fitting. For years the two stages may remain little connected, and only considerable practical experience finally brings them together, giving the cutter the habit of planning ahead by visualizing the result on the figure, and by adjusting his now familiar system accordingly.

The recognition of the fundamental link between modelling and 'flat cutting' has from the very beginning had a decisive influence on the choice of practical methods adopted at the Katinka School, for it became important not to lose sight of this connection, so helpful for practical pattern designing, and so useful in teaching; nor to allow it to be overlaid with too much theory. This led, for instance, to the checking and discarding of some well-established methods of drafting and block adaptation because, when checked by direct modelling on the stand, they were found to be either unreliable or simply incorrect (e.g. some methods of introducing darts into bodices and skirts, inconsistent with the outline of the pattern—see Chapter II, sec. 10 and Chapter XI). It also led to preference for simpler methods and to greater reliance on 'average' proportions, when it became evident in practice that certain individual details of the figure could not be controlled successfully by any system of measuring and calculation, however clever in theory, but only by fitting, i.e. 'modelling' on the figure. Since such difficulties could not easily be solved except by direct fitting, it was found to be simpler to work on a good 'average' basis and to allow for adjustment on the figure, if necessary.

Finally, it led to accepting as correct only that which could be proved to be correct on the stand (or on the figure), and it became a matter of routine to test all patterns cut

on the flat by seeing them on the stand, pinned as paper models (or paper 'toiles').

Checking on the stand patterns which are designed and cut on the flat is of considerable value: all kinds of mistakes can be seen and corrected, lines can be improved and the balance adjusted—all this before cutting the material. It can also be of great educational value in training the eye and developing judgement and good taste: for the ultimate object of all pattern study is *Pattern Designing*, i.e. the free, unguided planning of all the details of a style in such a way, that the resulting garment is an elegant model in which not only the fit is correct, but all the style lines are well balanced, becoming to the wearer and in keeping with current fashion.

Pattern designing is both a science and an art. A study of the *fundamental principles* and methods provides the essential basis of scientific data which every cutter must possess, and *which can be learnt*. Evolving a variety of styles against the background of ever-changing fashion is the creative side of the work, in which natural ability or *flair*, individual taste and fashion sense play a considerable part: this can be *developed* but *not learnt*.

Dealing with patterns on the stand (whether modelling them or testing) is invaluable precisely because it helps to develop natural ability: it teaches one to use one's judgement, to see mistakes and to learn from them.

As a practical method for producing patterns modelling has many disadvantages and limitations, particularly under modern conditions of wholesale production. But in replacing modelling by a more exact, reliable and modern system, one must endeavour, at any rate in teaching, to retain some of the advantages of modelling, not the least of which is the possibility of learning by 'direct experience'. Whether used for demonstrating or for testing, the dress stand undoubtedly provides this opportunity.

In one way or another, therefore, some connection between the two systems must be preserved, and the more scientific modern way of designing patterns on the flat must be kept flexible and adaptable to all changes of fashion, exactly as modelling invariably is. It must not be allowed to degenerate into a rigid system of hard rules and abstract calculations, for that way lies the greatest danger of all pattern designing on the flat.

Applying the Metric System to Practical Pattern Designing

The change-over to metric measurements in pattern cutting presents two different problems. One is that of straightforward conversion of the various proportions to metric equivalents, using a comparative double-notation ruler or tape measure. This presents little difficulty, except for the fact that it is often necessary to make a *practical* decision as to whether a slight *increase* or *decrease* would be more acceptable for the result required. Few measurements have exact equivalents if awkward, often completely unworkable decimal figures are to be avoided.

The other problem—the more difficult of the two—consists in the drawing up of **a new scale of average sizes**—metric sizes, to form a basis, not so much for converting, as for 'reproducing' in decimal notation the cutting system *as an integral whole*, i.e. with blocks progressing systematically from smaller to larger sizes, exactly as they do with the Imperial measurements. It was essential to achieve this before any further steps in developing the system in its new metric form could be undertaken for, without such a scale to support the practical results, few of the former rules and methods would have stood the test of the change-over. As it is, most of them can be applied with the new metric measurements and, where a change is sometimes introduced or suggested, this is not necessarily because of a conversion difficulty, but because the opportunity has been taken of improving or simplifying the working method previously followed.

In planning such a new range of 'metric sizes' one has to be guided by two important considerations: (a) **the new sizes** must be close to the old ones, on which all our experience is based and **cover more or less the same range** (from Bust 32" to Bust 46"), without, however, creating difficulties in the application of the system, such as *direct conversion* might produce (Bust 36" 'converted' to 91.43 . . . cm is obviously a difficult figure to operate with); (b) the **new range of sizes must be suitably 'graded'**, with the intervals between the sizes fixed so that as few difficulties as possible can be expected in the various calculations made when changing from one size to another.

The choice of a **4 cm interval between the sizes** (size Bust 84, 88, 92, 96, etc.) gives a sizing scale which has many advantages. First of all it is easy to operate when applied to a cutting system of this type, where some 'grading' is involved (incidentally, the use of as many **even** numbers as possible is also a help). It also connects itself well with the sizing systems of several countries, important in the world of fashion, for instance with the French haute couture which uses dress stands 42–44–46 = to Bust 84, 88, 92 cm (i.e. equal to half of each of these bust measurements). These sizes have been used for generations in the Paris Model Houses and are still popular in the high class trade all over the world. The 4 cm interval also represents the nearest approach to American grading (the 1½" grade) and actually coincides with the Size Charts of several other countries, such as West Germany, for instance.

Perhaps the biggest advantage of this choice is that with the smaller interval between the sizes (4 cm instead of 2" equal to 5 cm), it becomes possible, when drafting, to grade, i.e. increase or decrease the various proportions by *a smaller unit* than the Imperial ½" or ¼", now the most generally used when changing from one size to another, and to use instead 1 cm—i.e. a *small* ½"—or 0.5 cm—a *small* ¼"—between **the closer spaced sizes.**

Thus the range of sizes from Bust 32" to Bust 46" which, at 2" intervals, consists of 8 sizes, when converted to the metric system with 4 cm intervals becomes **a range of 10 sizes**, from Bust 80 cm to Bust 116 cm, with most of the changes from one size to another proceeding in *whole* centimetres and *half* centimetres, avoiding other decimal values.

The Metric Table of Average Sizes given here is not, therefore, just a simple conversion of the Table used with the Imperial measurements, but a scale worked out independently on the basis of a series of drafts, produced directly to metric measurements, which follow the newly established scale of ten (instead of eight) sizes. This does not change the actual method of drafting, but only the measurements and proportions, some of which, incidentally, have been changed intentionally to obtain a slightly different result (e.g. back shoulder slant).

A Table of Average Measurements and Proportions is of considerable help not only in guiding the drafting of new blocks, or as a general reference chart for checking and comparing results, but also **in taking individual measurements more correctly.** As frequently stated, accurate measuring is always difficult and results tend to vary from one measurer to another, even when the same or a similar way of measuring is followed. It is here that a Table covering a range of *average* sizes is so useful: it immediately shows up a measurement which is too far removed from the average, and either makes one *check it again* on the figure or, if confirmed, *draws special attention to it* as a possible fitting problem. Since ready-to-wear clothes fit most people reasonably well, referring to *average sizes* when taking *individual* measurements eliminates many absurd mistakes and makes for more reliable results. All this applies even more to metric measure-

ments, as here the measuring unit is so much smaller that it is easy to pull in the tape measure to register 1 cm more or less, easier than when using inches. Results can become very approximate unless a reliable check by standard proportions can be applied at the same time.

While on the question of 'taking measurements', it will be easily understood that to use anything less than 0.5 cm will hardly ever be necessary. Applied to anything which is not absolutely rigid (inanimate), smaller units tend to lose their significance and, in practice, when dealing with the figure, or even with the fabric, to aim at greater accuracy than that obtained within the limits of whole centimetres, or perhaps half-centimetres, becomes quite unrealistic. In *theoretical work*, such as basic drafting or grading, most results will be sufficiently accurate with the **0.5 cm as the smallest unit**, with the occasional use of **a plus or minus sign**, and smaller values (millimetres) can be justified only by some special requirement (e.g. possibly such as grading of patterns in the wholesale manufacturing trade).

Finally a word of advice may be useful to those who have to venture beyond simple conversion instructions, who have to guide others or to make quick decisions and solve more complicated problems—the pattern designers and cutters, and particularly the teachers: the sooner one learns *to work directly in centimetres*, without constantly referring to inches, the shorter will be the inhibiting transition period which of necessity will slow down one's working pace.

It may be helpful, for instance, to get accustomed to various metric measurements which will be in constant use by *memorizing them in groups*, referring to a *particular basic measurement or proportion of the figure*. Thus the average LW (Length to Waist) varies from 38 to 43 cm (i.e. from 15" to 17" approx.). This immediately conveys the notion that anything *below* 38 cm (excluding children's measurements) is a very short waist and above 43 cm—quite a long one. The average shoulder length varies from 12 cm to about 15 cm—a range of 3 cm only; the back neckline from 6 or 6.5 cm to 8.5 cm—a range of 2 cm only (helped out in alternate sizes by a minus sign); the xBack width—from 33 to 43 cm—a range of 10 cm, etc.

By memorizing *logically* one group after another (armholes, Top arm measurements, darts, even hem widths), and so establishing in each group a *standard* for comparison (sorting out what is long, medium or small), one may learn more quickly not to work mechanically, by just *following* an instruction, and to stop converting everything back into inches in order *to visualize* it all in familiar terms. For skilled craftsmen it will be this inability to visualize quickly results obtained when working in centimetres that in the early stages will probably be the main and real stumbling block, and the sooner it is overcome, the better. It will also be helpful to learn at an early stage the equivalents of a few simple measurements constantly used in developing fancy patterns: a short list of these follows.

The examples of conversion given below all illustrate mainly **the difference of approach in different circumstances** of pattern designing, and show that no hard and fast rules can be established in dealing with this essentially practical problem.

The Centre shoulder seam will be achieved in average cases by moving NP 0.5 cm and SP 1 cm forward for, as already mentioned, the shoulder seam has been placed slightly higher in the metric bodice block and a full ½" or ¼" are no longer necessary (see point (b) above). In some cases, however, a little more, i.e. 1 + cm and up to 1.5 cm at SP and 0.5 + cm at NP may be recommended. In a Raglan shoulder use 1.5 cm at both ends.

The forward underarm seam can be 1 cm or 1.5 cm to the front or, in fact, any distance (as required by the style)—it has not quite the same significance for the fit as the shoulder seam.

Pleats: The most usual width of wide pleats being 2½"–2¾", the most suitable metric width will obviously be 6 or 7 cm. For very wide ones 8 cm and up to 10–11 cm will be used, especially for long, loose, single pleats. For narrow ones, corresponding to 1" pleats, the 3 cm depth is most likely to establish itself, at least in the heavier fabrics, with possibly narrower pleating for silk and lighter materials.

Gores in skirts present little difficulty and in converting involve few calculations. Dividing a pattern into 4 or 8 gores is done by folding the pattern lengthwise, and only the 6-gore skirt (or Panel skirt) may sometimes present a small problem. On the other hand, **hem width addition** to the gores may have to be worked out in the same way as when using inches. The most usual width addition at the side of a gore ('side flaring') will be 6 or 7 cm, though of course both less and more can be used. 6 or 7 cm added on 8 edges (in a 4-gore skirt), will give $8 \times 6 = 48$ cm and $8 \times 7 = 56$ cm *extra hem width*, i.e. about another half metre added to the basic 1¼ metre of the standard skirt block.

Wraps in bodices and blouses can be taken as equivalent to the usual ", i.e. 2.5 cm or, according to size of buttons, they may also be 3 cm or just 2 cm wide, while for a shirt Box pleat opening—4 cm, or 3 cm for the narrower one—would be suitable.

Collars: For narrow Stand collars 3 cm (i.e. *over* ") appears correct, and up to 4 and 5 cm high for the wider variety. The usual width of a simple flat or roll collar (Peter Pan variety) would be 6–7 cm.

These few examples show sufficiently how different considerations enter into each problem, so that each one has to be solved on its merits by taking all the circumstances into account, and, with constantly changing fashions in style and fabrics, no precise conversion rules can be given to cover all cases.

CHAPTER ONE | MEASUREMENTS AND BLOCK PATTERNS

BLOCK PATTERNS

The function of a Block or Foundation pattern is to provide a simple outline of bodice, skirt or sleeve, from which every kind of style pattern can be developed. It must also serve as a map or chart for recording useful information about the proportions, shape and even posture of a figure, average or individual.

A block aims at representing on the flat some part of the figure, and since the figure is three dimensional, the block, in addition to information on shape and size, should have details, such as darts, 'ease', etc., which suggest the three dimensions. From a well-planned and detailed block a skilled designer-cutter can usually understand the type of figure, and can visualize it as if he were working on a dress stand. This extra information adds considerably to the speed and accuracy of pattern designing. Moreover, it does away with many preliminary calculations, and generally reduces excessive preoccupation with technical details at a stage when the exercise of artistic judgement, good taste and fashion sense is of particular importance.

For example, when planning the pattern of a certain style, its correct waist fit, whether tight, close, loose, full or pouched, can usually be obtained with little or no calculation by merely referring to the appropriate lines, seams or darts marked on the bodice block. This enables one to concentrate on the details of the design, with the result that the interpretation of the style can be more effective. As another example, one can mention the cutting of draped styles, where one has to rely considerably on the figure-shaping darts of the block to obtain a close fit of the dress: without such a close fit the correct set of tightly draped (or swathed) folds cannot be achieved. In both cases the possibility of giving more attention to *style*, while the correct *fit* is ensured by the details recorded on the block, is a real advantage to a pattern cutter who is a true designer and not merely a skilled but uninspired technician.

The art of good cutting depends largely:

(*a*) on the reliability of the blocks, from point of view of line and fit;
(*b*) on the information recorded on the blocks (some simple blocks give too little);
(*c*) on the skill of the cutter in manipulating the blocks.

It is unreasonable to expect a pattern to have a good line if the block from which it is evolved does not have it. A Standard block pattern must be tested frequently for line and fit on a figure of average shape and proportions: any *definite* change observed should then be incorporated in the block without delay. Allowance for the bigger 'stoop', rounder shoulders, wider and longer back of the average modern figure are all examples of such recent block adjustments.

It is important that the **basic structure of a block** should be such that any necessary adjustment can be introduced easily, without upsetting the balance of the whole pattern. As will be seen further on when various types of block are discussed, the soundness of the construction of a foundation can be judged by its adaptability. A foundation which can soon become out-of-date, and yet is too rigid or too complicated to be adjusted easily, is not reliable in practice and can be a serious handicap to a cutter of ability with a keen appreciation of line and fashion.

With regard to the second point, i.e. the additional **information recorded on the blocks**, such as the amount of waist reduction, the bust or shoulder blade shaping, the balance, the lines indicating different levels of the figure, the basic seam variations of the skirt block and so on, it must be understood that all this is shown in a way which is accepted as a convenient form of recording it. It does not mean that in every case all these details must be referred to or applied exactly as indicated on the block. This would be very limiting and would reduce the practical usefulness of a foundation pattern.

The fact that a bodice block is drafted with a shoulder dart, and a deep dart at that, does not mean that it can be used only or mainly for developing styles with shoulder darts; still less that all bodices and blouses cut from it must have darts or fullness on the shoulder whether the design shows it or not. Likewise the waist darts marked on the block do not compel a cutter to produce only close fitting styles: often these darts are not even referred to. Even such a seemingly fixed line as the shoulder line may have to vary its position for some designs; while the 'fashion waistline' only too frequently moves up and down, away from the natural waistline marked on the block. When it comes to *designing*, nothing in a foundation is fixed and immovable: everything can be changed to suit style and fashion.

The feature which gives a block its permanent character is the information recorded on it which helps the cutter to reconstruct the shape of the figure when developing a pattern. The clearer and fuller this information,

the longer a block should last, for a *figure* does not change with every change of fashion.

For example, the Shoulder dart of the bodice block records a well-established fact, easily proved by modelling, that a flat piece of material cannot be made to fit over the curve of the bust without developing some surplus fullness, which must be taken into account when planning a pattern. This fullness can be suppressed by means of darts or seams, or made use of in many different ways, according to style (see Chapter VI). It can be increased by closer moulding or decreased by easy draping over the bust. It can even be concealed in the cut of the style or by the use of technical methods such as shrinking, stretching or padding. But it can no more be ignored than can the curve of the figure which causes it. The most convenient way of indicating it in a modern block is by means of a single deep dart on the shoulder. For certain reasons connected with easier and more reliable block construction, a shoulder dart has always been preferred in this system. But where blocks are drafted with darts in other positions or even with seams replacing darts, the aim is still the same, i.e. to give the block its shape in depth or its third dimension.

The same applies to waist darts and to many other details of the block: they all point to something which the cutter should bear in mind when working on the flat, away from the figure. It goes without saying that the usefulness of this information increases or decreases with the ability of a designer-cutter to apply it in practice with skill and understanding.

And this brings us to the last point, i.e. **the skill of the cutter in manipulating blocks**. It cannot be stressed too much that the best of blocks is of little value in the hands of an indifferent or inexperienced cutter. The ability to use a block with good effect is an art in itself. It is an opportunity for displaying not only knowledge of rules or experience but also artistic ability, taste and appreciation of fashion. Developing a style pattern is designing in the fullest sense of the word, particularly when applied to dressmaking (the scope is more limited in classical tailoring, where cut and details are so much more standardized). An indifferent cutter is quick to blame the block for everything that goes wrong. A good cutter will not do so for the simple reason that he will not use a block that does not satisfy him. He will knowhow to adjust it to the higher standard of his requirements in the same way as would a good worker in any trade or craft.

DIFFERENT TYPES OF BLOCK PATTERN

According to the conditions in which patterns have to be used, there are different types of block, varying in details, in presentation and even in method of construction.

A block which is suitable for trade work may not be the best type for home dressmaking or for teaching, unless the training is vocational. A block which is specially adapted for factory methods would probably be quite unsuitable in the model trade or high-class 'custom' work. Each type has its specific features which make it suitable for the requirements, the technique and the conditions of work in each particular case. A good block should, in fact, be the best tool for the job.

It is important to recognize the variety of conditions in which patterns are made and used, and to understand that blocks must be adjusted accordingly. Following from this, it will be seen that flexibility is one of the most valuable features of a *basic block*. It should be possible to adapt such a foundation not only to every class of trade and every type of work but, if necessary, even to the special ideas of a designer-cutter, so that the block can reflect the style of an individual craftsman.

By way of illustration, four different types of bodice block can be mentioned, all used in connection with these methods: the Standard block, the Simplified block, the Trade block and the Tailoring block.

STANDARD BLOCK

The Standard block is used throughout this book and is **the basic foundation** which *follows the natural lines of the figure* and is little influenced by other considerations. Its main object is to provide a reliable and lasting basis of correct proportions and fit, from which more specialized blocks can be produced when necessary, and by which every type of pattern can be checked. To what extent passing fashion trends should affect it is a matter for the individual cutter to decide, but, as already stated, any well-established change in shape and posture of the average figure must be reflected in its construction. A Standard block may be neutral, i.e. it need not emphasize fashion exaggerations, but it must never be 'old-fashioned' in line and fit.

The Standard block drafted in the next chapter has undergone some modifications since it was originated more than forty years ago. A few adjustments were made to conform to recent definite changes in the shape and posture of the average figure (e.g. change of balance, or of position and slope of shoulder). But its main proportions and the whole system of construction have stood the test of time.

The Standard block is the basis from which other foundations are developed. It is used for all high-class individual (bespoke) work, involving fitting. It is also the most suitable block for teaching advanced pattern making.

SIMPLIFIED BLOCK

The Simplified block differs from the Standard in that it is produced by a *simpler method of drafting*. This makes

it more suitable for schools and technical classes, where the primary object of drafting is not to understand bodice construction, but to have a reliable pattern for practical dressmaking. Such a block pattern, made to individual measurements, can be tested at a fitting and adjusted to suit individual requirements. It is less suitable for advanced teaching, involving theory of fitting and elaborate pattern designing; nor is it so useful for developing other blocks (with the possible exception of very simple Trade blocks).

TRADE BLOCK

The Trade block is an *adaptation of the Standard block* made to suit various requirements of the wholesale manufacturing trade. The proportions of such a block may follow one of the numerous 'Size Charts' used in the 'wholesale', or be adapted to fit a special dress stand. The block may underline and even over-emphasize some current fashion trend (e.g. exaggerate squareness of shoulders or width of back). It may include details and proportions based on commercial considerations to help in the sale of the garment to a bigger range of figures (e.g. the use of extra long waists or of armholes larger than necessary). Finally, it must comply with the special demands of the wholesale or factory technique, where accuracy in assembling and speed in making-up are of paramount importance. Such a block, for instance, would probably dispense with some fine points of cut and even reduce its 'shaping' (use of darts or of 'ease') for the sake of greater simplicity in making-up, so essential for high-speed machine work. On the other hand, it would have definite turnings (seam allowance) added round all the edges, and would provide a clear system of 'balance marks' or notches for the accurate assembling of the garment.

Trade blocks undergo constant modifications with every change of fashion, with new developments in factory technique, with new ideas in retailing (e.g. the sizing system in shops). They also vary considerably from one firm to another, according to the standard of fit expected, the dress stand used, the model employed and, of course, the type and class of retail trade served. No standardized Size Chart has so far been accepted by the manufacturing trade as a whole. It is therefore impossible to give a Trade-block adaptation which would satisfy everybody and be of lasting value to the whole trade. Every experienced wholesale cutter should, however, be able to produce his own version from the Standard basis.

TAILORING BLOCK

The Tailoring block is yet another adaptation of the Standard block which introduces a few special features and proportions characteristic of most jacket patterns drafted by tailors. Some of these special points are closely linked with the technique of high-class tailoring, which involves some manipulation of the garment during the making-up to give it its correct final shape. Other changes are merely differences in proportions essential for an outer garment, worn over another.

PRESENTATION OF BLOCKS

The presentation of the blocks may vary considerably. The Standard block used throughout this book is *drafted without any turnings (seam allowance)*. All the patterns developed from it are **nett patterns**, i.e. they have no turnings, which must therefore be allowed for when laying out the pattern on the material. This is in keeping with the technique of **high-class dressmaking**, where turnings vary according to the texture of the fabric, where generous inlays (extra width of turnings) are often necessary for fitting purposes, such as individual adjustments of fit and style and, finally, where the work of careful pattern outlining along the actual Sewing (or Fitting) Lines is still the generally accepted rule.

A nett pattern is also to be preferred for teaching. Besides ensuring greater accuracy of line and fit and generally enforcing throughout a better standard of workmanship, it has the advantage of providing valuable training for the eye in recognizing the good or bad shape of Sewing (or Fitting) Lines—*the lines that really matter*.

The Trade Block usually includes turnings for reasons already explained above. In adapting a Standard block **for wholesale manufacturing** work, seam allowance should be added to the nett standard basis. This must be done with great accuracy and the turnings kept even throughout, since, in the absence of clearly marked sewing lines, the assembling and stitching in the 'wholesale' is usually done at some specified distance from the outer edge, which thus becomes the guide for accurate sewing.

In **commercial patterns** (paper patterns) used largely by home-dressmakers, who often have little or no experience in cutting out, turnings are included in all patterns *for safety*. Little holes are punched, however, along the sewing lines to help in tacking-out (outlining) and tacking-up (assembling) the garment correctly. In the same way a pattern made from the Simplified block can, if preferred, have turnings added to it before laying it on the material. These turnings can later be cut away or folded back to facilitate careful outlining and accurate assembling. All this will depend, of course, on the methods used in class, or on the ideas and experience of the teacher.

Blocks are made to last, and therefore most of them are cut out in thick paper or thin cardboard, which is easy to cut to ensure a well-shaped, smooth outline, yet firm enough to provide an edge round which one can run the pencil when tracing the block for adaptations. However, according to the type of trade and the methods and ideas of the cutter, blocks are made in a variety of materials:

in thin mull or calico, in leno (often backed with something) and in different kinds of paper or cardboard, including the very heavy type used in factories.

PRIMARY AND SECONDARY BLOCKS

The three Primary blocks are the Bodice, the Straight Sleeve and the Standard Skirt. The latter follows the natural outline or silhouette of a 'walking figure', i.e. a figure in motion, and widens slightly towards the hem.

From these Primary blocks one can obtain such Secondary blocks as the Shaped and the Tight sleeves, the Fully Shaped or the Straight skirt, various collars, the Raglan, the Kimono block and others. Although it would be quite logical to produce the pattern of every style by starting from one of the Primary blocks, it is much more convenient and time-saving to have a complete range of Secondary foundation patterns at hand.

It must be remembered, however, that with the notable exception of circular skirts and some collars, all the Secondary foundations are obtained from the three Primary blocks, which are themselves produced by direct drafting.

Before explaining the drafting of any of the Primary blocks, the question of measurements must be considered.

MEASUREMENTS

There are two different approaches to the drafting of patterns by measurement. One relies entirely upon **direct measurements** taken on the figure; the other, on various **measurements and proportions obtained by calculation** from one or two basic measurements (mostly from the bust, sometimes checked by height). This is generally known as the 'Divisional system' of drafting, as distinct from the 'Direct system' of drafting. The Divisional system (or any variation combining both systems) is used mainly in tailoring and, whatever its merits, it is generally much too rigid for dressmaking, where shapes of garments are less standardized, fashion changes more frequently, fashion details are more varied and subtle, and fabrics cover a much bigger range.

The Direct measurement system has many detractors (chiefly among tailors) because the taking of direct measurements is considered difficult and unreliable, and the construction of a basic pattern on such data is thought to be unscientific.

There is much truth in this, and it must be admitted that the taking of measurements is difficult and never foolproof. It is impossible, for instance, to establish exact points or levels on the figure from which or between which one could measure with anything like the accuracy expected in drafting. The figure may vary slightly from day to day, and the physical state, even the mood of the person, may affect some measurement (e.g. a tired person usually tends to stoop more, and so will have a wider back). A different foundation garment may change some measurements, and personal preferences may have to be taken into account (preference for tighter- or looser-fitting clothes, for instance). Finally, to all this must be added the difficulty of applying contour measurements to a flat surface, i.e. a sheet of paper. Results are bound to be somewhat approximate, and inaccuracies have to be allowed for even in the case of experienced workers, several of whom may measure the same figure with slightly different results.

Notwithstanding all these difficulties, direct measurements must be used because there is no satisfactory substitute for them, at least not in dressmaking. The only thing one can recommend is to take and use measurements intelligently, according to a definite plan, and with due sense of responsibility.

One of the most important preliminary steps is to establish a **basis for registering measurements** and, where several people use them, there must be a clearly agreed-upon *common basis*. The method of measuring must be definitely related to the method of producing the pattern, for when a dressmaker is used to taking measurements loosely the addition for fit in the pattern will obviously be smaller than when the measuring is done close to the figure or almost tightly (as recommended in this system). Generally speaking, good results can be expected only if there is agreement on all these points, and if everybody concerned (e.g. saleswoman, cutter, fitter) is quite clear as to which measurements are essential, and which are only supplementary.

A further suggestion for improving the standard of measuring is to develop the habit of comparing measurements taken on individual figures with those of average figures. It is a well-known fact that experienced workers check their own measuring by mentally comparing the results obtained with *average* proportions. Anything which appears unusual and very different from the average is often re-measured at once, and an attempt is generally made to confirm the result by personal observation. Thus, if the difference between the chest and the back measurements is found to be more than usual, one would expect to *see* the reason for it in a more stooping or more erect carriage. This narrows down considerably the margin of possible mistakes. A learner, unable to draw on past experience, is advised to refer to a reliable 'Table of Average Measurements and Proportions' and to develop the habit of reasoning on the basis of careful observation.

Finally, the last suggestion is to avoid taking too many measurements or relying on elaborate methods of measuring, which encourage the tendency to work mechanically and provide more opportunity for mistakes, particularly in the case of less-experienced workers. A complicated method appears often quite logical in theory yet

may break down completely in practice, either because the cutter has not mastered it sufficiently, or the figure does not conform to theory in some important respect, or for some other personal or technical reason, such as a customer's preference, a difficult fabric and so on. There is nothing more discouraging than producing an ill-fitting garment, or even one which simply does not please the customer, after one has spent time and effort on a complicated system of taking measurements. It is far better to rely on a few simple measurements, applied with skill and understanding, and to leave a reasonable margin for possible adjustments at the fitting.

There are **Basic Measurements**, which are essential for the construction of every pattern, and **Supplementary Measurements**, which may be useful when working on a particular design or for a particular figure. The choice and number of the latter depend on various circumstances and are influenced not only by style and fashion but also by the ideas, experience and working methods of the cutter. Some cutters use no such extra measurements, either for ensuring better fit or for style planning, for they prefer to make all the necessary adjustments at a fitting. Others, on the contrary, like to do more planning ahead and to provide for the difficulties of fit and style at the pattern-making stage, considering a fitting as a mere checking of results. Many of the more experienced cutter-fitters belong to this group and, while measuring a person, they take their own additional measurements and notes on the shape of the figure, for which no general instructions can be given.

BASIC MEASUREMENTS

BODICE

1. Bust
2. Hips
3. Waist
4. Back width
5. Chest width
6. Shoulder
7. CB Length to Waist
   Front Length to Waist is an optional measurement

SLEEVE

1. Top Arm measurement
2. Length of Arm
3. Length to Elbow
4. Elbow width
5. Wrist

SKIRT

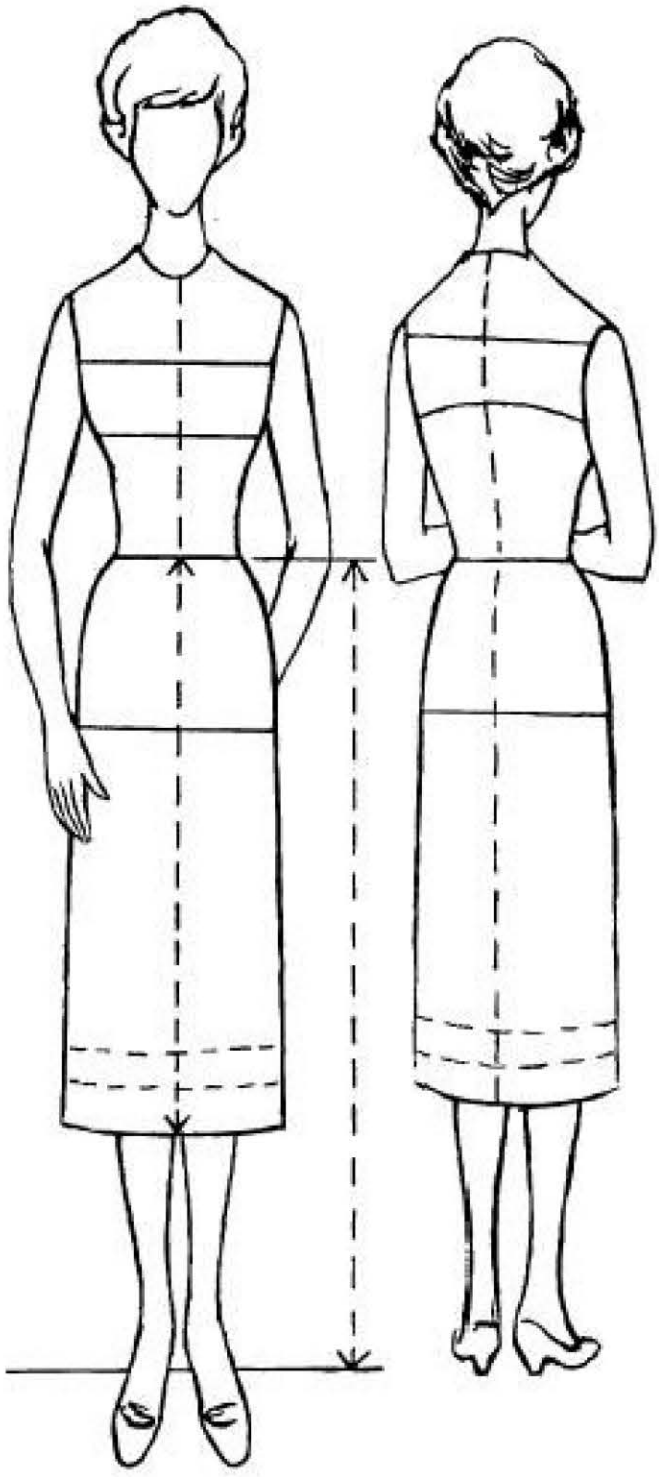
1. Hips } as for bodice
2. Waist }
3. Length
   Length to the ground is optional

This list could be reduced by omitting measurements 5 and 6 for the bodice, and 3, 4 and even 5 for the sleeve, replacing them by *average measurements* to be adjusted at the fitting. It is convenient, however, to have these individual measurements, not only because of greater accuracy in cutting (e.g. for the pattern of a Tight sleeve) but also because they are a useful indicator of the *shape* and *posture* of the figure—stooping, average or erect, square or sloping shouldered. All these measurements provide a cutter with useful data to support his personal observation.

The 'Front Length to Waist' may be taken for the same purpose, i.e. to confirm observation of the shape of the figure (prominent high bust) and in the case of skirts, the 'Length to the ground' can be useful to record the height of the figure and possibly to emphasize a person's preference for longer or shorter skirts.

MEASUREMENTS

BUST
HIPS
WAIST
CB LENGTH TO WAIST
BACK WIDTH
CHEST WIDTH
SHOULDER
TOP ARM
LENGTH OF ARM
LENGTH TO ELBOW
ELBOW WIDTH
WRIST
SKIRT LENGTH



HOW TO TAKE MEASUREMENTS

BODICE MEASUREMENTS

1. **Bust**—round the fullest part of the bust in the front, *raising the tape slightly* to a level just below the shoulder blades in the back. Measuring quite close to the figure, *almost tightly in small sizes* (less so in large sizes).
2. **Hips**—round the fullest part of the hips, average 22 cm below the waist (20–25 cm). Measuring very close to the figure, even tightly in smaller sizes.
3. **Waist**—round the natural waist, measuring only as tightly as a skirt band should fit (small waists can easily be pulled in too much).
4. **Back width**—across the back, approximately 10–12 cm below the nape of the neck. This should be a generous measurement, allowing for any natural stoop, and the person measured should not stand more erect than usual.
5. **Chest width**—across the chest, fairly low, approximately 12–13 cm down from the base of the neck, with shoulders thrown well back. (In Trade Charts this measurement is often taken 2–4 cm higher and therefore registers 1–2·5 cm less.)
6. **Shoulder**—down the middle of the shoulder, from neck (NP) to point of shoulder (SP) where the sleeve begins. This measurement tends to be *influenced by fashion.*
7. **Back Length to waist**—down the CB from nape to natural waist. This measurement tends to be influenced by both personal taste and fashion.
8. **Front Length to waist**—is taken down the front from Neck Point (NP), i.e. the highest point of the shoulder (which is easy to establish), over the fullest part of the bust to the waist. (In Trade Charts this measurement is often required to be taken from the *middle of the shoulder.*) This is an optional measurement which, though useful, particularly for checking *shape* of figure, must be used with great care and not exaggerated. It is unnecessary for a draft made to *average* measurements.

SLEEVE MEASUREMENTS

1. **Top Arm measurement**—round the fullest part of the arm, passing the tape high under the arm and joining it on the top 10–12 cm below the point of the shoulder. The measurement, which tends to be influenced by fashion, is an easy one at present.
2. **Length of Arm**—from top of arm, i.e. Shoulder Point (SP), passing over the elbow point down to the *back of* the wrist, above the little finger. The arm should be bent at the elbow. The length is influenced by personal taste, less by fashion.
3. **Length to Elbow**—from the same point as above, down to the elbow point (not too long).
4. **Elbow width**—round the elbow, passing exactly over the elbow point, with the arm well bent. Nothing is added to it in tight sleeves, so it must be big enough to allow for comfortable bending of the elbow.
5. **Wrist**—round the wrist, a close measurement, but not too tight.

SKIRT MEASUREMENTS

(in addition to Hips and Waist given above)

Skirt Length—down the CF, from the waist, as long as required. This measurement varies, of course, for different types of skirt, so the Skirt block is made to the most usual length worn, and this length is the one noted in the list of measurements. This measurement is also influenced considerably by personal taste and particularly by fashion, changing more frequently than any other.

The Length to the ground can be taken at the same time, and the difference between the two noted.

AVERAGE SIZES

In considering the question of 'Sizes', it is important to differentiate between those based on body measurements and those based on the final size of the garment. The two are frequently confused, creating difficulties both in the production and in the sale of ready-to-wear clothing. The measurements given in the **Table of Average Measurements and Proportions** are all body measurements, **i.e. nett measurements to which nothing has been added for fit.** Throughout this system these nett measurements are the basis of '*Size*', which always applies to *the figure to be fitted* and not to the garment that fits it. It is the cutter's responsibility to know how to produce a garment to fit each 'Size' in keeping with style and current fashion.

A different approach to this question exists in the wholesale trade, where 'Size' is often the size of *the actual garment for which a figure must be found* and many wholesale Size Charts consist of *theoretical sizes*. The problem is further complicated by the variety of ways used to describe the 'Sizes', such as 'English size 40', or 'American size 16', or 'French size 42', or in some English firms the 'W' size, etc.

The modern trend, however, is for the 'Size' to be more directly related to a body measurement (e.g. the Bust, Hips, Waist or Height), responsibility for the actual size or *fit* of the garment being left to the skill and judgement of the cutter.

All the 'Sizes' referred to throughout this book are based either on the Bust measurement (for blouses, dresses, coats) or on the Hip measurement (for skirts) and are graded every 4 cm, as shown in the table on p. 16.

TABLE OF AVERAGE MEASUREMENTS AND PROPORTIONS

MEASUREMENTS

	Bust B	Hips H	Waist W	Waist Length LW	xBack xB	Chest Ch	Shoulder Sh	Top Arm TA
I	**80 + 10**	86 + 6	64	38/40 (36)	33/34	35	12—	28
II	**84**	90	66	39/41	34/35	36	12	29
III	**88**	94	68	39·5/41·5	35/36	37	12·5—	30
IV	**92**	98	70	40/42	36/37	38	12·5	31
V	**96**	102	72	40·5/42·5	37/38	39	13—	32
VI	**100**	106	76	41/43	38/39	40	13	33
VII	**104**	110	80	41·5/43·5	39/40	42	13·5	34·5
VIII	**108**	114	84/86	42/44	40/41	43	13·5	36/37
IX	**112**	118	88/90	42·5/44	41/42	44·5	14	38
X	**116**	122	92	43/45	42/43	46	14·5	39/40

PROPORTIONS

	Point O CB	Back neck width	Depth of armhole (*Bust line*)	Back UP	Dart	Armhole (*approx.*)
I	2	6·5—	20·5	5	6	40
II	2·5	6·5	20·5+	5	6·5	41
III	3	7—	21	5	7	42
IV	3	7	21·5	5·5	7·5	43
V	3·5	7·5—	22	6	8	44·5
VI	3·5	7·5	22·5	6	8·5	46
VII	4	8—	23	6·5	9	47
VIII	4	8	23·5	7	9·5	48
IX	4·5	8·5—	24	7	10	50
X	4·5	8·5	24·5	7	10·5	51/52

LENGTH TO WAIST: the shorter LW is based on an average height of 160–165 cm (5'4"–5'5"); the longer is for taller figures.
LW is not dependent on or connected with the other measurements, except height, and a shorter or longer waist can occur in any 'Size'. The LW can, therefore, be always increased without affecting the other proportions of the draft.

xBACK WIDTH: a slightly wider xBack can be used in each case. This is particularly useful in the *smaller sizes* where back width often does not conform to a strictly 'graded' scale. The *small* addition can be made without any change in the draft, e.g. without changing the position of UP (though shoulder may have to be lengthened).

CHAPTER TWO

THE BODICE BLOCK

Take a rectangle of paper 75 cm long. The width should be at least ¼ Bust + 5 cm or ½ Hips + 3 cm, whichever is the larger, with an extra 4–5 cm added for margin.

N.B. It is not essential to fit the ½ bodice into a rectangle so that Hip points touch: back and front may be drafted *some distance apart*. It is advisable, however, to avoid overlapping.

The left edge or preferably a line parallel to it (2 cm inside the edge) is the Centre Back (CB); the right edge or a line parallel to it—the Centre Front (CF) of the bodice. It is also convenient, though not essential, to use a line across the top, 2–3 cm below the top edge of the paper and parallel to it, calling it the Top Line.

The Bodice Block is drafted to the following **Average Measurements—Bust 92:**

Bust (B)	92 cm	(46)
Hips (H)	98 cm	(49)
Waist (W)	70 cm	(35)
Length to Waist (LW)	40 cm	
Back width (xB)	36 cm	(18)
Chest width (Ch)	38 cm	(19)
Shoulder (S)	12·5 cm	
Top Arm measurement (TA)	30 cm	
giving armhole = 30 + 12 or 13 =	42–43 cm	

THE BACK

On the CB Line mark **point O** 3 cm below the Top Line.

For the two smallest sizes (I–II) mark 'O' 2–2·5 cm down, for larger sizes (V–VI) 3·5 cm, (VII–VIII) 4 cm and for the largest sizes (IX–X) 4·5 cm, i.e. *changing every two sizes* except for the two smallest.

Measuring from point O down CB Line mark the following points:

40 cm for **Waist Line**—a measurement of the figure.
62 cm for **Hip Line** which is 22 cm below the waist.
21·5 cm for **Bust Line**. This fixes also the *depth* of the armhole.

This proportion is taken according to a scale based on the Bust measurement, i.e. for Bust 92 it is 21·5 cm, then 0·5 cm more or less for sizes bigger or smaller, except the two smallest (see Table of A. M. & P.). Thus for Bust 88 it is 0·5 cm less, i.e. 21 cm; for Bust 96, 0·5 more, i.e. 22 cm; for B 100, 22·5 cm; etc.

11 cm for **Back Line**, always half-way between point O and the Bust Line.*

3 cm for **Shoulder Line**—a fixed proportion *for all sizes*.

From all these points, including point O, square to CB the following construction lines: the Hip Line, the Bust Line and the Waist Line going right across the paper to

* To avoid dividing a fraction, the figure (21·5) is first increased to the nearest whole centimetre (22) before halving it, i.e. 11 cm.

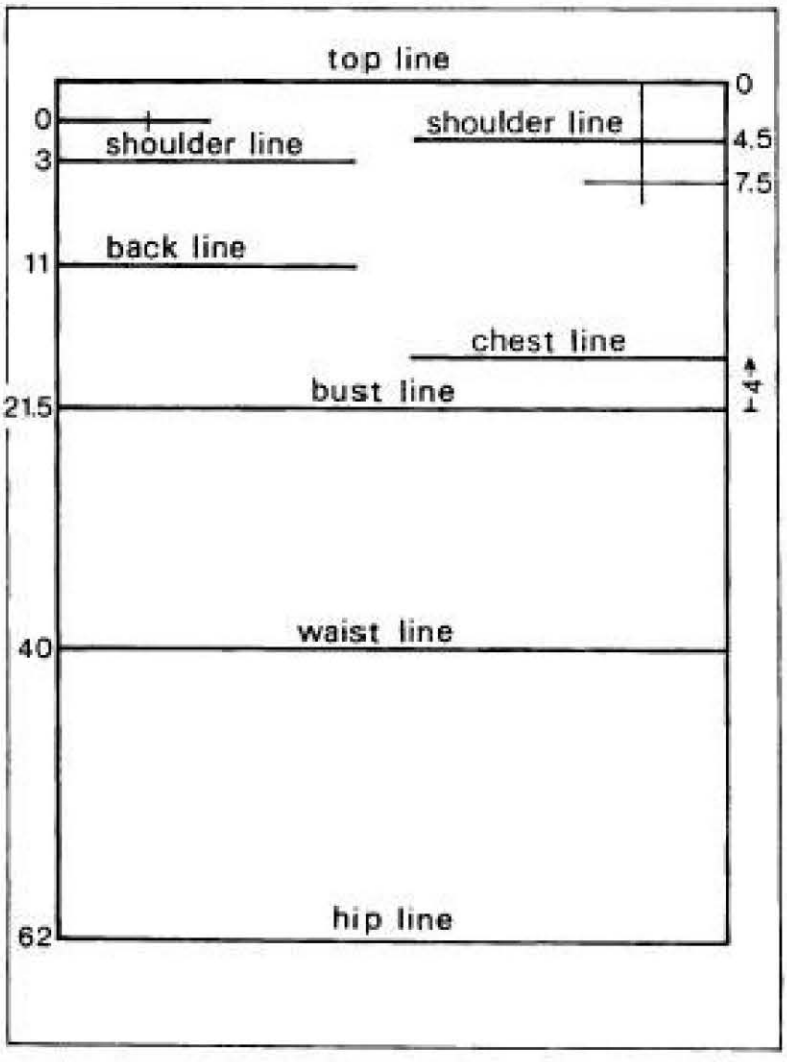


FIG. 1/II

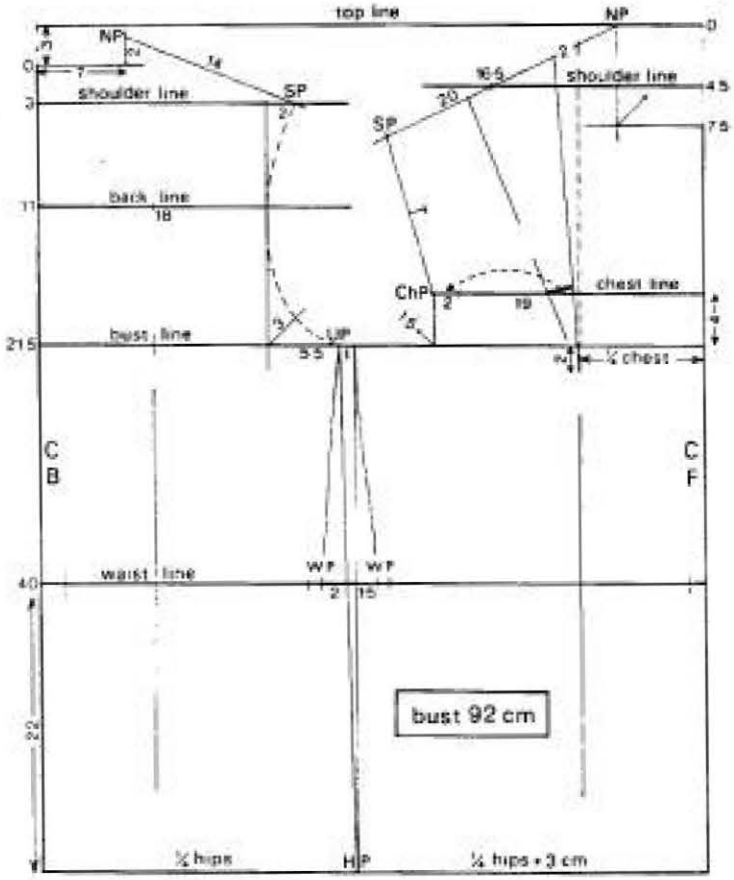


FIG. 2/II

the CF; the Back Line and the Shoulder Line less than half-way across; the highest line, squared from point O (Neck Line) only 10–12 cm long.

From O, along the Neck Line, measure **the Neck width** and take this point 2 cm up. This gives the Neck Point—NP.

The *Neck width is graded* according to a scale based on the Bust measurement, taking 7 cm for B 92 and 88 and 0·5 cm more or 0·5 cm less for every two sizes smaller. An alternative method is to work it out by taking one-eighth of the Bust Measurement plus 2·5 cm and use only half of this (7) for the half-pattern.

On the Back Line (3rd line from the top) measure from the CB ½ Back measurement (18 cm for a 36 Back). Through this point draw a vertical construction line, parallel to CB, just crossing the line above and the line below.

On the Bust Line (the line below) measure **½ Back + 5·5 cm** and mark the Underarm Point—UP.

The addition to the xBack for the position of UP will vary slightly from 5 cm (smallest) to 6·5 cm in large sizes (see Table).

On the Shoulder Line (line above) measure **½ Back + 2 cm** and mark the Shoulder Point—SP.

Draw neckline from NP down to CB, curving it slightly.

Rule the shoulder seam between NP and SP.

Draw the back armhole using the vertical construction line as a guide. Keep armhole straight for about 3 cm near the Back Line level. Hollow it out very little in the lower part, taking the curve through a point 3 cm from the angle.

On the Hip Line measure from CB ¼ Hip measurement and mark the Hip Point—HP (in some cases ¼ H + 1–2 cm).

Draw the **Straight underarm seam**, ruling it between UP and HP. For the **Shaped underarm seam** mark 2 cm in at the waist (or just below it) and draw the slightly curved seam through this point, as shown in FIG. 3. The pattern will be cut on this line which is the *outer* shaped side seam.

Check the length of the shoulder seam which should be at least 1 cm, but on an average 1·5–2 cm longer than the Shoulder measurement (in this example, 14 cm). Lengthen (or shorten) if necessary, keeping SP on the same level, i e. on the Shoulder Line.

THE FRONT

The Bust Line, Waist Line and Hip Line having already been taken across to the Front, it now only remains to add the Chest Line, the front Shoulder Line and the line for the base of the Neck.

The CF Line goes up to the Top Line (or to the top edge of the paper, if this line is not used). Point O is marked right at the top of the CF and so comes 3 cm higher than Point O of the CB (higher in large sizes).

Measuring from O down the CF Line mark the following points:

4·5 cm for the **Shoulder Line** (4 cm for larger sizes).
7·5 cm for base of neckline (8–8·5 cm in large sizes).
From the Bust Line measure *up* 4 cm for the **Chest Line**.

From all these points square construction lines to the CF, extending them about half-way across, except for the Neck Line, which is only 10–12 cm long.

Along the Top Line, from point O, measure the 'Neck width' equal to the Back Neck width. This measurement, however, should never be less than 6·5 cm in the front, even in small sizes. Mark front NP.

From NP draw the neckline on to the line 7·5 cm below with the help of a short vertical construction line from NP. The curve should pass through a point 3 cm from the angle formed by the crossing of these two lines (3·5 cm in large sizes).

On the Shoulder Line measure from the CF 16·5 cm (for all sizes) and through this point rule from NP a provisional shoulder seam, leaving it unfinished (20–22 cm long).

Another method of finding the slope of the shoulder is that used in the draft of the Simplified Bodice block (Appendix I).

On the Bust Line measure ¼ Chest measurement from CF (9·5 cm).

Through the last point (and from 2 cm below it) rule a vertical construction line parallel to CF up to the shoulder, and from here measure 2 cm to the left. From this last point rule the *inner* line of the Shoulder Dart down to 2 cm below the Bust Line.

Measure and mark the size of the Dart (i.e. 7·5 cm) along the shoulder, and complete the Dart by ruling the *outer* line to join the inner line 2 cm below the Bust Line.

The Shoulder Dart for Bust 92 is graded 0·5 cm up and down for every size bigger and smaller.

Now complete the shoulder seam by measuring from NP the shoulder length of 12·5 (a measurement) plus the Dart depth of 7·5, i.e. 20 cm. Mark the front SP.

On the Chest Line, from the CF, measure ½ Chest width (19 cm), missing out the Dart, and mark *Chest Point*—ChP. The length CF to ChP is 19 cm plus whatever the Dart measures *at that level* (in this example 2, giving 21 cm).

Rule a line between SP and ChP, and drop a short perpendicular on to the Bust Line, as a guide for drawing the armhole.

Measure from CF along the Bust Line the 'Bust width' of the Front, which is the difference between the total Bust width of the pattern (i.e. ¼ Bust + 5 = 51 cm) and the width (23·5 cm) already obtained for the Back along the Bust Line. Mark the front UP at 51 minus 23·5 = 27·5 cm from CF.

Draw the armhole, curving it 1+ cm from the straight line SP–ChP, and hollowing it out well in the lower part (the reverse of the back armhole). Take the curve through a point 1·5 cm from the angle. The armhole dips slightly below the Bust Line before reaching the UP.

On the Hip Line mark HP at ¼ Hip measurement + 3 (2·5) cm. In some cases it may be slightly more. **N.B.** In FIG. 3 HP's touch, but this is not essential.

Rule the **Straight underarm seam** between UP and HP, and then draw the outer **Shaped seam** through a point 1·5 cm in at the waist.

Draw a **lower Waistline**, which follows more closely the waistline of the figure, dipping a little towards the front. Mark 0·5 cm below WP on the side seam, both on the back and on the front, and 1+ cm below the waist of the CF (in large sizes 1 cm below WP and 2–2·5 cm on CF). Draw the final Waistline through these points, starting from the usual CB length (as drafted). It is easier to do this after planning the Waist darts, which should come down to this lower level, with both sides matching in length (FIG. 3).

Draw the **True Bust Line** 4 cm below the Bust Line of the draft and parallel to it. It is sufficient to show it on the Front only (for further details see sec. 3 of the 'Bodice Analysis', page 24). It is a useful reference line.

To obtain the **final shoulder**, close and pin out the Shoulder dart (bringing the two lines together and leaving the dart underneath folded back towards neckline); then rule a straight line from NP to SP and cut on it through the folded dart. When the dart is unpinned again the shoulder seam line will have the shape shown in FIG. 3, with a point above the middle of the Shoulder dart. N.B. For back shoulder dart see sec. 11, page 31.

Finally, before cutting out the pattern check **the Armhole**, measuring first round the back and then round the front part of it, with the tape held on edge: this makes it easier to follow the armhole curve and gives a more accurate result. The **total armhole size** should be 12–13 cm more than the Top Arm (TA) measurement.

Correct, if necessary, or leave to be corrected at the fitting (see sec. 8 of Bodice Analysis). A 0·5 cm mistake can be disregarded.

To increase or decrease the armhole size, the most usual way (though not necessarily the best) is to lower or raise UP a little less than the increase (decrease) required (e.g. 0·5–1 cm down for an armhole which must be 1·5 cm larger). Re-draw armhole through the new point and measure again to check (see also sec. 8, Bodice Analysis).

WAIST SHAPING

The bodice block, as drafted, is loose fitting round the waist. It is convenient to have it planned for a closer fit as well. The waist will therefore be reduced to an average 'dress fit', i.e. to **Waist + 4–5 cm**. This gives half-waist + 2 (2·5 cm) on the half-pattern. If desired, the 4 cm addition for an average dress fit could be reduced to 3 cm or increased to 6 cm.

More detailed explanations of the principles underlying the waist shaping of a bodice are given in sec. 12 of the Bodice Analysis, and at this stage the relevant facts are only summed up in a few simple rules to be followed when reducing the waist to a tighter fit:

(*a*) When tightening the waist one should aim *at distributing the* 'Waist Reduction' (WR) round the figure as much as possible. One should avoid taking in the waist at one or two points only, for example, in the side seams (overshaping these is a frequent cause of fitting trouble).

(*b*) Not every part of the waist is equally suitable for reduction. The biggest reduction can be made near the main curves of the figure, i.e. under the shoulder blades in the back and under the bust in the front. The CB, the CF and the side seams can deal with only limited amounts.

(*c*) Following from the above, the amounts to be reduced on the CF, the CB and in the side seams can be *fixed* for all sizes. The remaining fullness is then taken out in the Waist darts, which vary with the figure.

In practice, waist shaping resolves itself into three operations: **establishing the total WR**; measuring and **marking off the fixed amounts**—2 cm at CB, 1 cm at CF and 1 cm at each side seam; and, finally, **planning the waist darts** to take out the remaining fullness, until the waist is reduced to ¼ Waist + 2–2·5 cm.

Method of Work—FIG. 3. Measure the waist from CB to the *outer* side seam (CB to WP) and continue measuring from the front *outer* shaped side seam (WP) until the tape registers ¼ Waist + 2–2·5 cm (in our example 35 + 2 = 37 cm). Mark this point (R): everything beyond it, as far as the CF, must be 'reduced', i.e. taken out to make the waist the required size, and is therefore known as **the total Waist Reduction (WR)**. Measure it and divide it more or less equally between back and front. Here it is 11 cm, i.e. 5 for the back and 5+ for the front waist.

The WR can also be obtained by *deducting* the required waist width from the total waist of the pattern.

Begin by measuring and marking off the **'fixed' amounts of WR**: 2 cm from CB for the Slanted CB Line; 1 cm from CF for the Slanted CF Line; 1 cm from each of the *outer* shaped side seams for the more shaped *inner* seams.

Draw the slightly curved *inner* side seams to the waist only, shaping them as shown in FIG. 3. For explanations and details of their shape see also sec. 5 of the Bodice Analysis, farther on in this chapter, and FIGS. 6 and 7.

Rule **the Slanted CB** up to the Back Line level **only** where it touches the original CB Line, so that *no Back width is lost*. This 'breaks' the CB Line and makes a CB seam follow more closely the slight curve of the spine. When a style has *no CB seam* and the CB of the pattern must be placed *to the fold* of the material the Slanted CB is continued straight, projecting beyond the original CB and adding width to the neckline.

Rule **the Slanted CF** in the same way, up to the Chest Line only, so that no Chest width is lost. From here it may, like the Slanted CB, have to project beyond the original CF, adding a little width to the neckline. In both cases, therefore, tightening the waist means adding extra width to the neckline: hence the advisability of *fixing* the WR at these points to a manageable quantity. The resulting extra neck width is controlled either by the top of a CB or CF seam, by small darts or by easing.

The remaining WR is dealt with by means of **Waist darts**. In the present example the *fixed* WR in the back has taken care of 3 cm (2 cm Sl. CB and 1 cm inner side seam) thus leaving 2 cm for a Waist dart. In the front, because of a smaller *fixed* WR, the Waist dart will be bigger, i.e. 3 cm and possibly more. In practice it will be found that the back dart can be taken as 2 cm through all sizes, because it may have to be increased by the value of the Sl. CB (2 cm) if the latter is *not* used on CB. All darts, however, can be varied and increased or decreased for a closer or looser waist fit.

Plan the construction lines (or centre guide lines) of the basic Waist darts at ⅛ Back width from CB (9 cm for 36 cm) and parallel to it; and at ⅛ Chest width from CF (9·5 cm) and parallel to it. Note that the position of these basic Waist darts is dependent upon the size and shape of the figure, i.e. upon Back and Chest width. When the Slanted CB is actually used the Waist dart is generally drawn parallel to it (see FIG. 13/II).

Complete the Waist darts by measuring half of their depth equally to the right and left of the construction line (e.g. 1 cm both ways for a 2 cm dart) and making the two lines meet 13–15 cm below the waist and 12–13 cm above the waist. The exact length may vary according to the depth of the dart (deeper darts must be longer to taper off neatly), but it is usual to stitch the front Waist dart to just below the highest point of the bust (i.e. 2–3 cm below True Bust Line) and the back Waist dart to a little below the shoulder blade.

The basic planning of Waist darts can be varied in pattern designing, and darts are often 'moved' and their size is re-distributed according to the specific requirements of the shape of the figure, of the design and of current fashion.

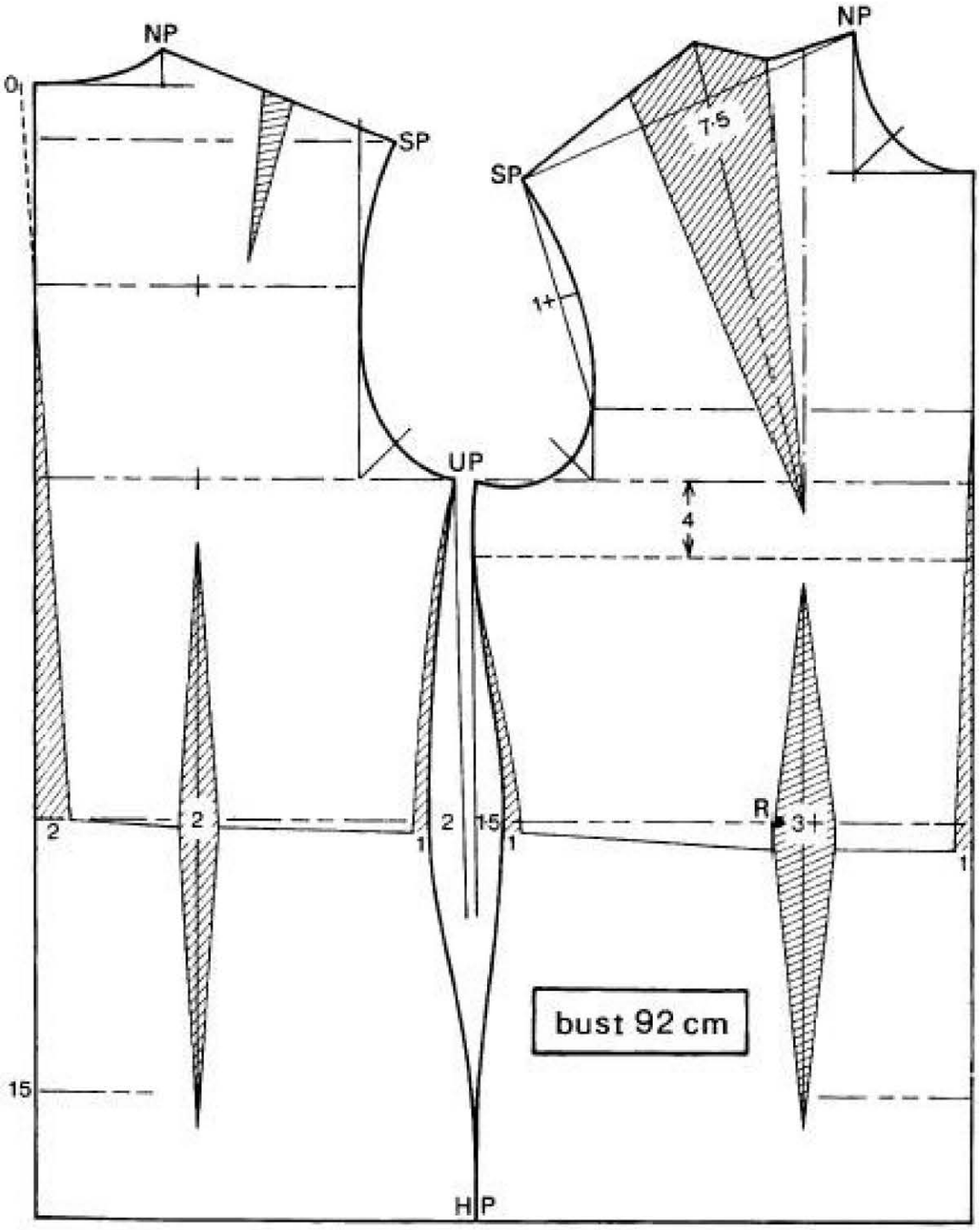


FIG. 3/II

STANDARD BODICE BLOCK

ANALYSIS OF THE BODICE BLOCK CONSTRUCTION

The following remarks and explanations are addressed mainly to those who already have some knowledge of drafting, and who wish to know the *reasons* underlying the various steps in the construction of this foundation bodice. Beginners are advised to miss out this section until they have become familiar with the use and manipulation of the bodice block. At a later stage this chapter should help to provide the essential theoretical basis for practical fitting, for a technique of fitting cannot be acquired systematically without a good understanding of the constructional details and the general principles embodied in the foundation pattern.

PROPORTIONS USED IN THE CONSTRUCTION OF THE BODICE

The various proportions of the bodice block are worked out in three different ways, i.e. by using:

(*a*) Direct figure measurements.

(*b*) Fixed proportions.

(*c*) Variable proportions.

The use of **direct measurements** requires no explanation. Less obvious is the reason for using fixed proportions and variable proportions, the latter based either on direct measurements or on grading and scales.

Fixed proportions, such as those controlling the slant of the shoulder, for instance, are used mainly for reasons of accuracy and simplicity. Different existing methods of assessing the value of these factors by *direct measurement* have not always proved very reliable in practice. They can also be very confusing to learners, who, by using them before they have had enough experience, are liable to make more mistakes than necessary. The introduction of at least a few fixed proportions is one way of ensuring the constructional stability of a pattern, and of reducing mistakes due to faulty calculations and inaccurate measuring by inexperienced workers.

It cannot be stressed too much, however, that these fixed proportions, established in practice, are the result of considerable experimenting and testing by fitting; and that they are subject to revision whenever circumstances seem to warrant it. They can and should be adjusted to any definite change in the shape of the average figure, or to any pronounced trend in fashion, such as, for instance, a squarer or a more sloping shoulder line.

Variable proportions used in this draft are either based on figure measurements, and so *change with them*, e.g. the 'bust width' or the 'hip width' of the pattern, the size of the armhole and so on; or they are obtained by 'grading', i.e. by following a carefully graded scale of increase or decrease for every size larger or smaller, e.g. the depth of the armhole or the back neckline.

In every case figures and calculations involved are reduced to their simplest terms to avoid mistakes in the application of the system. Working out the necessary data by seemingly logical but complicated methods, often involving awkward fractions, is not always justified by results obtained under ordinary working conditions, and further adjustments are frequently necessary at the fitting stage. This can easily undermine a learner's confidence in systematic drafting. Therefore simplicity and safety in practical use are considerations of the greatest importance.

There is yet another and special reason for relying so often on **simple graded scales**: they introduce a learner at a very early stage to the whole idea of 'grading', which is a methodical change of average standard proportions through a range of sizes. Many teachers have recognized the danger of considering *individual* measurements and fitting problems too much before a sound knowledge of well-balanced *standard* proportions has been acquired. The early use of graded scales and constant reference to *average measurements* is an effective way of counteracting this danger.

Average measurements have always been the basis on which drafting systems are evolved. Under modern conditions they have the added importance of being the practical basis on which the manufacture of ready-made clothing has developed. Since so many women can be fitted with a garment made to average measurements, it is essential not to allow problems of individual figure peculiarities to overshadow the importance of producing a well-balanced pattern for a standard shape and size. The secret of successful styling and fitting often lies in the fact that a woman of indifferent proportions can, when fitted with a well-cut average size garment, be made to look as if she were of good average build and shape, if the lines of the style suit her so well that a 'good fit', as such, becomes a factor of secondary importance. That a dress may look well without fitting too well in every detail is one of the achievements of the modern technique of designing and cutting.

The construction of the bodice is analysed under the following twelve headings:

1. Bust width—average fitting allowance
2. Distribution of bust width
3. Bust Line—true level
4. Hip width and its distribution
5. Side seam—position and shape
6. Neckline
7. Shoulder
8. Armhole—shape, depth and size

9. Balance of the bodice
10. Front contour shaping—Shoulder dart
11. Back contour shaping
12. Waist shaping

1. BUST WIDTH—average fitting allowance

The bodice block is drafted with the addition of 10 cm to the bust measurement, *a measurement taken fairly tightly on the figure*. This does not mean, however, that the bodice, when sewn, will necessarily be 10 cm bigger than the figure. The extra width distributes itself in several ways: some of it is lost in the sewing of the Shoulder dart, some in the curving of the side seam, and some in the *shaping of the waist* (i.e. Slanted CB and CF—see FIG. 4). In fact, whenever a bodice needs the full 'waist shaping', i.e. the use of the *inner* side seams, of the Slanted CB and CF, and of all the Waist darts, the finished total bust width *measured on the True Bust Line*, works out only about 6–7 cm more than the bust measurement. In the case of a style not requiring any waist shaping (e.g. when using straight side seams) the fit round the bust will naturally be looser: but this is quite in keeping with such a style.

Thus, to a certain extent the fit of the bodice block adjusts itself to line and style. As will be shown in later chapters, it is possible with further manipulation to use it for closer fitting or even tight garments, as well as for very loose ones. The extra width given to the block is therefore only a **suitable fitting allowance for an average dress bodice**, an allowance easily modified to suit a different type of garment, style, fashion and personal taste.

Nevertheless, it has often been observed in practice that this average allowance of 10 cm in the draft and 5–7 cm in the finished bodice is sometimes excessive for small figures and not quite sufficient for large ones. To overcome this difficulty without complicating the drafting system, it is suggested that the bust measurement be taken tighter on the small figures (or when a tighter fit is generally preferred), and looser on large figures. This will adjust the fit as required. The same advice would apply to any other circumstances in which a closer-fitting block would be desirable, e.g. sometimes when using a stretchy fabric.

An important point to note is that in a bodice drafted with less than 10 cm extra over the bust measurement (i.e. 5 cm extra on the half-pattern) it is not always easy to obtain a *correct size of armhole* because of the risk of losing underarm seam length if the armhole has to be made deeper. Enlarging an armhole by cutting it *down* may shorten the side seam too much and make the fit of the sleeve uncomfortable when the arm is raised. Armhole and sleeve fitting is thus connected with bust width, and may become a real fitting problem when too much 'Armhole width' (FIG. 5) is lost, for instance through taking in a bodice on the side seam. One must always remember that in a pattern the 'total bust width' must be sufficient to provide a comfortable width for the Back, for the Chest and for the Armhole.

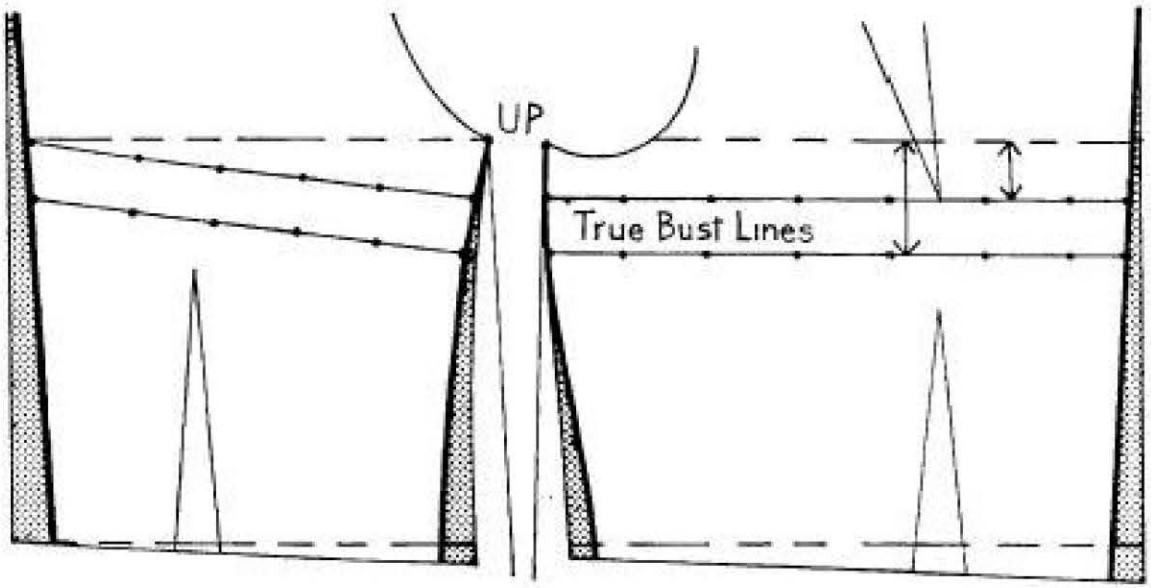


FIG. 4/II

2. DISTRIBUTION OF BUST WIDTH

The total bust width must not only be correct for the *size* of the figure, but it must also be correctly divided between front and back for the *shape and posture* of the figure (FIG. 5).

In the bodice draft the Underarm Point (UP) is placed 5·5 cm farther out than the half-back width (6–7 cm on large figures), so that the width of the pattern between CB and UP is always determined by the Back measurement and varies with it. As a consequence, the front width between CF and UP also changes according to the Back measurement, and when the back is wider the front is narrower, and vice versa. Thus two figures with the same Bust measurement but different Back measurements will have bodices of the same *total width*, but differently distributed between back and front.

A person with an erect posture normally has a narrower back and wider chest (as well as a higher bust) than average: obviously a better fit will be obtained in this case by allowing more width for the front and less for the back. The reverse applies to a flat-chested, round-shouldered figure, having usually a wide back and a narrow chest. The Back and Chest measurements are thus of considerable help in visualizing the shape and posture of the figure, and in allocating accordingly the correct proportion of the total bust width to the back and to the front of the pattern. By directing the attention of the cutter to the *shape*, as distinct from the *size* of the figure, these measurements help to achieve a better line and fit of the bodice.

3. BUST LINE—true level

The Bust Line of the bodice draft, on which the proportion ½ Bust + 5 cm is applied, is a line which does not correspond to the fullest part of the bust on the figure, but comes a little above it, under the arms. This construction line of the draft not only gives a pattern its correct basic width but also controls the depth and so the size of the armhole, as well as the 'balance' of the pattern (see sec. 8 and 9). It is thus an essential construction line, which it is convenient to call Bust Line.

For block adaptation and pattern designing, however, it is often necessary to know and to be able to refer to the level which represents the fullest (or highest) part of the bust, and which registers the maximum bust measurement. This may be important for dart manipulation (see Chapter VI), for the correct planning of the lines and details of a style, and for the *checking of the final bust width* of a pattern (FIG. 4).

It is therefore convenient after the drafting of a bodice block to draw on it a little below the Bust Line a special *reference line* indicating the true level of the bust, and to call it the **'True Bust Line'** (FIG. 4).

For average figures the True Bust Line is usually indicated at 4 cm below the Bust Line of the draft and parallel to it. It is sufficient to show it only in the front, where it is mainly needed. Should it be necessary to refer to this level in the back, the line can be continued (often only imagined, not always drawn) slanting up towards the CB (exactly as the Bust measurement is taken).

For many figures, particularly the younger ones, this

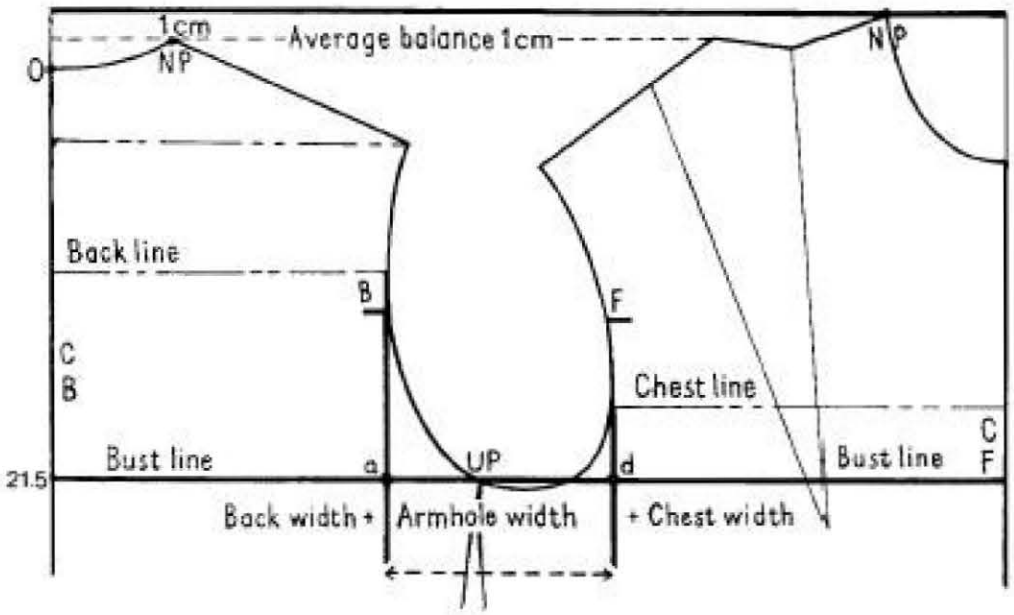


FIG. 5/II

4 cm level is too low, and 2 cm higher (i.e. 2 cm below the Bust Line of the draft) is used instead (FIG. 4).

In some special cases (e.g. special styles), when it is important to know the exact level of the highest point of the bust, an actual measurement is taken on the figure from the Shoulder (NP) down to the bust point (X), and applied on the pattern. On some large figures this may be 6–7 cm below the Bust Line.

4. HIP WIDTH—and its distribution

The bodice block is drafted with 6 cm fitting allowance round the hips, corresponding to that of the skirt (see Chapter XI). Many long bodices, jumpers, jackets and dresses have to be tighter round the hips to suit style, fashion or figure; while others have to be looser than the block. The adjustment is quite a simple one and is usually made on the side seam.

An important detail is the unequal division of the total Hip width, exactly half of the Hip measurement being allocated to the back, while the whole 6 cm fitting allowance is added to the front (½ Hip size + 6 cm or ¼ Hip size + 3 cm on the half-pattern). In practice, this proportion has been found to give a satisfactory line to the side seam, though on some figures it may need altering.

5. SIDE SEAM—line, position and shape

The side seam is fixed by two points: the UP at the top, and the HP (or WP in short bodices) at the lower end. The UP is controlled by the Back measurement, and through this is connected with the shape of the figure (sec. 2). The HP position is based on the Hip measurement. Between them they place the side seam correctly to achieve the required division of the total bust width between back and front, and to give the seam a correct line on the figure.

The line of the side seam on the figure should appear straight and vertical (or almost so). A slight deviation from the vertical may be ignored; but a definite inclination must be adjusted. This is usually done by moving UP forward, i.e. adding to the back and taking off the front and re-shaping the seam accordingly. In a few cases UP may have to be moved back, but not more than 1 cm (mainly in small sizes with very wide backs). Occasionally it may be necessary to move the HP instead, mainly forward.

The correct position of the side seam on the figure is in the middle of the underarm or a little to the back of it. As the back of the bodice is usually narrower than the front, it is seldom necessary, either when designing patterns or when fitting, to move the side seam farther back (the few exceptions are mainly in tailored styles). It is, however, sometimes necessary to move the side seam forward, increasing the width of the back at the expense of the front. This may happen for various reasons connected with style and with shape and size of figure. It is also an essential preliminary to the cutting of some patterns, mainly those in which the shoulder and sleeve are cut in one. Among these are the important secondary block patterns, the Kimono and the Raglan bodices: in these a 'forward' side seam is an advantage and gives a better fit.

The shape of the side seam (FIG. 6), as it appears **on the pattern**, follows as closely as possible the natural shape of the average figure. On the back the side seam *curves in* from the straight line between UP and the waist, because the figure here is usually flat and often hollow. On the front, the side seam *curves out* at the top, where the prominence of the bust pulls the seam forward; it then

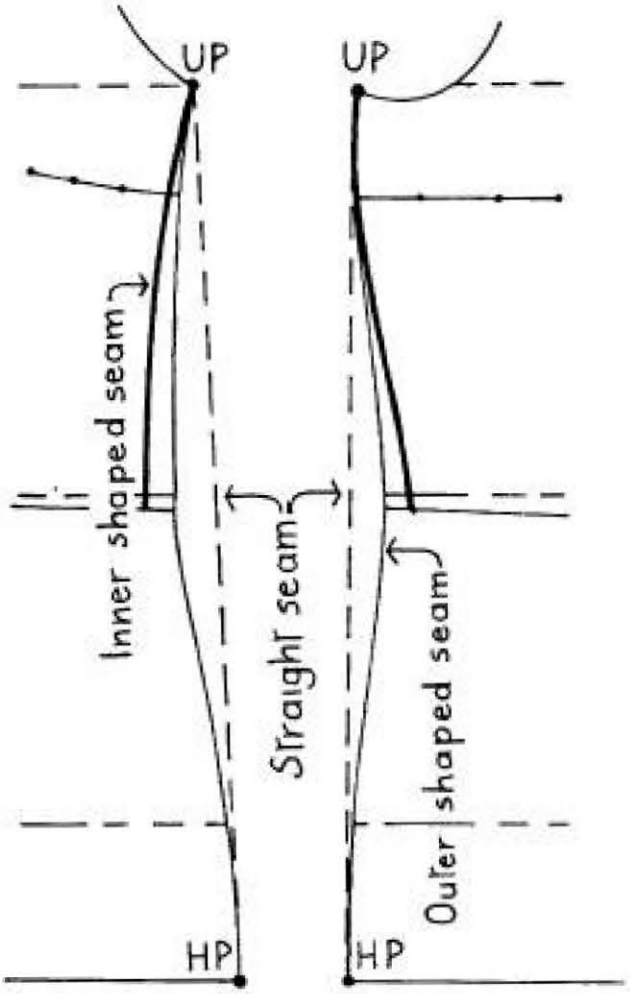


FIG. 6/II

goes in at the lower end to fit into the hollow of the waist. Continued below the waist the Outer Shaped seams both *curve out* to fit over the hips.

These curves adjust themselves on the figure to produce the straight, almost vertical seam line mentioned above, and to give a neat, fairly clinging fit on the underarm.

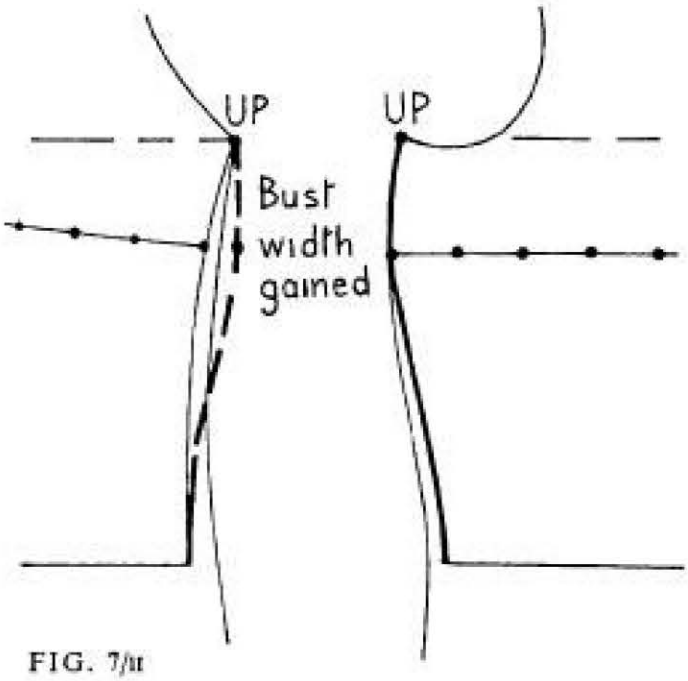


FIG. 7/11

In the process of 'hollowing' the seam line of the pattern, particularly in the back, some width is lost round the bust (FIG. 4); but there is no danger of getting the bodice too tight, because of the generous basic fitting allowance of 10 cm. In fact, it is usually necessary to lose some of this in an average dress bodice. It is only when the bodice is cut with less fitting allowance round the bust that the correct shaping of the side seam becomes more difficult and the back edge of the seam often has to be curved out, like the front (FIG. 7). With a few exceptions, this is done, not to provide ease over a prominent part under the arm or in the back (the shoulder blade is *above* that level), but merely to introduce *extra bust width*, lacking in the pattern. This shape of side seam is much used; but even its adoption by fashion designers and by the wholesale manufacturing trade does not alter the fact that it does not follow the natural shape of the figure.

6. NECKLINE

The back neckline is an important part of the bodice framework, and the fit of the NP-s (Neck Points) as well as the set of the shoulder seams depend on it.

When the back neckline is too wide and the NP-s do not fit up to the neck, the shoulder seam is in the wrong position and the SP-s hang off the shoulder. This naturally upsets the fit of the collar and also the fit of the sleeve.

When the back neckline is too narrow there are 'drags' (short tight diagonal creases) across the shoulder and an uncomfortable tight feeling round the back of the neck; the front of the bodice may be pulled up.

It is, therefore, most important that the width of the back neckline should be correct to ensure a good basic fit of the *whole* neckline, with NP-s fitting well up *to the neck* at the sides, and shoulders setting correctly.

A little over one-third of the total neckline size is usually allocated to the back. But since the actual neck measurement is not always taken (and is even intentionally omitted because it is neither easy to take nor very reliable to use), the necessary proportion can be worked out quite satisfactorily from the bust measurement, or taken according to a scale, as is done in this draft. Both these methods have been well tested in practice for good average results. In individual cases the neckline can and should be adjusted if necessary at a fitting.

The depth of the back neckline of the draft is 2 cm below NP, and this is sufficient for an average shape of neck and for most styles. It can be increased by raising NP to 2·5–3 cm for long, forward bent necks, or when cutting patterns of over-garments, such as coats.

The front part of the neckline will always fit quite correctly *at the sides*, if the fit of the back NP-s, i.e. the 'basic neckline fit', is correct. The depth of the front neckline tends to vary more than the back with posture and shape of neck, and has to be checked and often adjusted at the fitting.

Any 'cutting out' of the neckline, done to follow style or fashion, does not affect the principle of 'basic fit'. In fact, it may be dangerous to cut out a neckline if the basic fit, controlling the shoulders, is not reliable.

Finally, it is important to remember that the weight of the garment, pulling at the neckline, may stretch it considerably when the garment is worn. This is taken into consideration when designing patterns and dealt with by 'blocking in' necklines for close fitting collars, by avoiding cutting out big necklines to their full depth and width before a fitting (they may stretch too much), and generally by allowing good turnings for adjustment.

N.B. The last remark does not apply to garments made up without fitting (wholesale).

7. SHOULDER

The tightness of the shoulder section depends on the *slant* of the Shoulder which, in the bodice draft, is controlled by a fixed proportion: in all sizes the back Shoulder is slanted to a level 5 cm below the back NP and the front Shoulder to 4·5 cm below the front NP (4 cm in large sizes). The aim is to obtain a shoulder seam which on the figure will run in the middle of the shoulder or only slightly to the back of it. This is a position accepted by most present-day cutters as being suitable for the average, slightly round-shouldered, modern figure.

This basic position can sometimes be varied and there are, in fact, styles for which the true **Centre shoulder seam** is essential (see Chapter III, FIG. 17). In connection with this it is useful to remember that in the older bodice blocks the shoulder seam was placed farther back from the middle, in keeping with the fashion ideas of the period, and to suit the straight-backed average figure of the time.

The fit of the shoulder section should be easy but not loose. Some extra ease may be allowed for padding, when this is fashionable. An easier fit is obtained by raising the SP-s, i.e. by slanting the lines less; a tighter fit, by lowering the SP-s and so slanting the lines more (FIG. 8).

With CF and CB of the bodice parallel and bodice joined at the NP (FIG. 8) the gap between the shoulder lines, in an average bodice pattern, is 9·5 cm (back slant 5 + front slant 4·5 cm). This represents average **tightness of the shoulder section** which may, however, have to be modified at a fitting, reducing the gap for a squarer shoulder, or increasing it for a more sloping one.

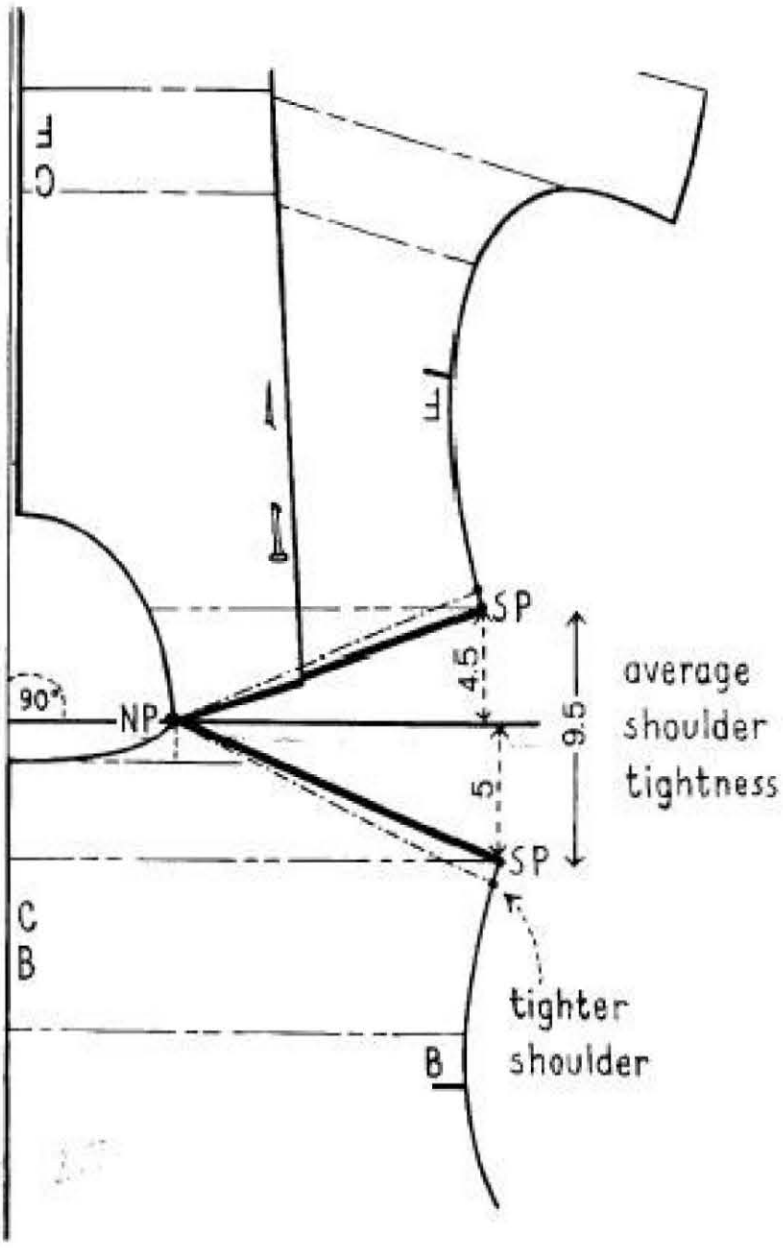


FIG. 8/II

8. ARMHOLE—shape, depth, size

In an armhole we have to consider its shape, its depth and its size.

The shape of the armhole may vary a little according to the shape and posture of the figure. The bodice draft gives an average armhole, fairly high in the back (a–b, FIG. 9) and well cut out in the front (c–d, FIG. 9). This shape allows for the slight roundness of back of the average modern figure. The broken line (FIG. 9) shows the alteration for a more erect figure with shoulders held well back, which would require less cutting out in the front but possibly more in the back. The reverse would be done for a more stooping figure. **The depth of the armhole**, i.e. the level to which it comes down, is controlled in the bodice draft by the Bust Line on to which the armhole is drawn. The Bust Line is therefore also the 'armhole depth' line (FIG. 9).

The level of the Bust Line is fixed by a proportion which is graded for different sizes according to a scale, and is measured off down the CB (see the bodice draft). Thus the same graded scale (21·5 cm for Bust 92 and so on) fixes also the correct depth of the armhole for every size of the bodice pattern.

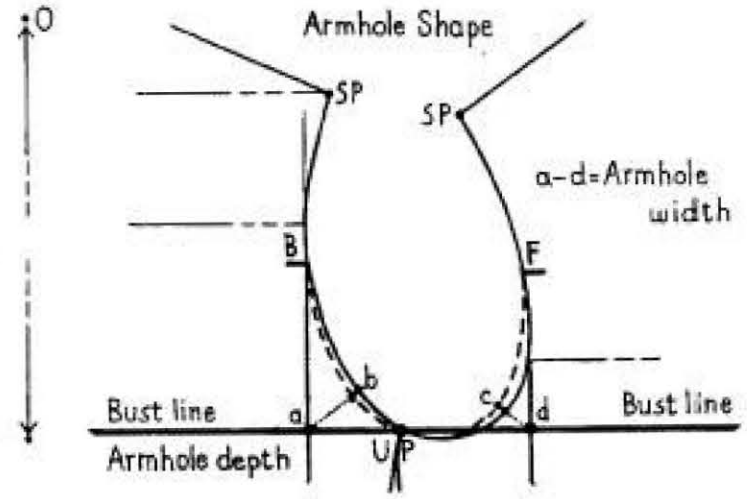
The size of the armhole depends on its **depth** (or Bust Line level); on its **width**, which is part of the total bust width (see sec. 1, and FIG. 5); and on its **height**, i.e. the slope of the shoulder and the position of SP-s: a higher SP, raised to fit a squarer shoulder (see sec. 7), makes the armhole larger, and vice versa.

If, at the final checking of the draft, the armhole is found to be too small for the arm, i.e. less than the Top Arm measurement + 12 cm, it can be **enlarged at the fitting in three different ways**: by raising SP (but only if the person has square shoulders); by making the armhole wider across (from a to d, FIG. 5 and FIG. 9), if more width in the bodice is acceptable; and by lowering it, i.e. by cutting it deeper. The reverse would be done to reduce the size. The armhole cannot be enlarged by cutting into it at the sides, as this would reduce the Back and Chest widths of the bodice.

When **correcting the armhole on the pattern**, i.e. before an actual fitting, usually only the lowering of the armhole is possible (unless one already has some knowledge of the figure and of its shape). This adjustment, however, can be dangerous because of the consequent shortening of the underarm seams of the bodice, which may result in an uncomfortable fit—a pull on the underarm—when the arms are raised. It is better to avoid lowering the armhole if other means of increasing its size are available. But, if there is no other way, and the armhole has to be cut deeper, then it must be done with care, and with as little loss of underarm length as possible. Adjusting the size of an armhole therefore requires judgement and understanding of how the armhole is *connected with the bodice as a whole*.

There is, unfortunately, no foolproof method of arriving directly at a correct size of armhole when drafting an *individual* size bodice, because the Top Arm (TA) is not always necessarily in proportion to the bust or other parts of the figure. Apart from an actual fitting (often not very reliable, particularly with inexperienced fitters), only a final checking and adjustment of size, *based on some definite method* (such as the use of the proportion Top Arm + 12–13 cm), and knowledge of armhole construction, can ensure a reliable size of armhole. On the other hand, the possibility of obtaining such a correct armhole *theoretically*, i.e. before an actual fitting (or even without one), is of considerable help in simplifying the fitting of the whole bodice, and particularly the setting in and fitting of the sleeve.

FIG. 9/II



9. BALANCE OF THE BODICE

The 'balance' of a bodice is the **correct, natural hang of the bodice** on the figure, whatever the shape and posture.

Finding a good balance is thus connected mainly with **adjusting the hang** or set of the bodice *to the carriage or posture (stance) of the figure*, allowing more back length (or height) for the figure which is stooping, and more front length for the figure which is erect.

A correct balance ensures a good fit of both neckline and shoulders and counteracts any possible tendency of the neckline to fall away from the neck, and of the shoulders to move (or slip) from their correct position. It is, therefore, a very important aspect of practical fitting.

Such well-known defects as bodice slipping off the shoulders and falling away from the neck in the back (upsetting sleeve and collar fitting) are due mainly to wrong balance, at least wrong for the posture of a particular figure. It is the responsibility of a cutter-fitter to find a good balance for each individual figure, as it is also the responsibility of a fitter to guard against spoiling a correct balance when adjusting, for instance, the fit of the shoulders (e.g. by taking them up at NP). In a stock size block the problem is to find a good balance for the *average* figure, and then to be able to control it easily through all style adaptations.

On a pattern, **the balance** is determined by the **difference in height between the back and the front**, i.e. the height measured from the Bust Line up to the highest point of the shoulder, which is NP. Measured from the Bust Line up, the front NP is usually higher than the back NP, and for an average figure, neither stooping nor erect, a difference of 1 cm gives the best balance (FIG. 5).

This 1 cm difference may vary and must be increased (i.e. front made longer) for a more erect and decreased (i.e. back made longer or front made shorter) for a definitely stooping figure. In the latter case both NP-s may even be on the same level or, in extreme cases, the back NP above the front NP, thus providing an extra long (or high) back for the stoop and the round shoulders of the figure.

In practice, this is done by slashing the pattern along the Back Line or Chest Line and inserting more length (height); or by 'tucking' the pattern along the same lines and so losing length (height) between the NP-s and the Bust Line.

It is also quite logical, in *average* patterns, to increase the difference for larger sizes, putting the front NP 2–2·5 instead of 1 cm *above* the back NP (see the draft), to provide for a more prominent bust in a large size. Frequently, however, this difference is correct only theoretically, and at a fitting it has to be reduced again, as even a large figure may have a long, round back, requiring more back length, instead of a high bust, requiring more front length.

10. FRONT CONTOUR SHAPING and the SHOULDER DART

The basic dart which deals with the surplus fullness produced by fitting material over the contour of the bust (a fact demonstrated by modelling) is given in this bodice foundation in its *shoulder position* (see the draft).

It is, of course, possible to draft an equally correct block with this basic **contour shaping dart in a different position**, for instance, in the side seam, under the arm, or in the waist, or on the CF Line. But though all these positions are correct and usable, it must always be remembered that **in each case the outline of the block pattern is different** and, consequently, the construction by drafting is different also. This change of basic outline can be clearly demonstrated by modelling several bodices on the stand, in each case eliminating the surplus fullness in a different position, and then comparing the resulting outlines on the flat.

It is important, therefore, to realize that the front of this bodice is so drafted that it is suitable only for a shoulder dart position and no other, i.e. one cannot use this pattern *as it is* with an underarm (or other) dart, as its present outline and proportions would not be correct for other dart positions.

The various dart positions can, however, be obtained by 'moving' the bodice dart from the shoulder whenever this is required by style, by fashion or by fitting considerations. This is not done by producing a new draft, but by manipulating the block in such a way that the dart appears in a different place, while at the same time the whole pattern outline changes and *adjusts itself to the new dart position automatically* and quite correctly (see Chapter VI). The method is quite simple and gives results identical with those obtained by modelling a piece of material on the figure or dress stand.

In this draft preference is given to the **Shoulder dart** because it makes the **drafting easier** and more reliable: moreover, the **balance of the bodice is more under control** when the basic dart is in this position. (N.B. The standard balance discussed in sec. 9 *looks* quite different in a pattern with an underarm dart, for, with armhole levels matching, the front NP appears to be below the back NP, instead of being above it.) Finally, the bodice with a shoulder dart is more versatile and, without a change of dart position, it can be used for a bigger variety of styles and types of garment, such as blouses, dresses, lingerie and even coats and jackets.

The size or depth of a shoulder dart is connected with the line and fit of the bodice block. As stated earlier in this chapter, the fit of this block is neither tight nor loose, but sufficiently *shaped* to outline the curves of the figure without moulding them: the effect aimed at is not a replica of the figure, but a well-shaped garment, fitting smoothly over the bust. The size or depth of the Shoulder

dart has a very important part to play in achieving this effect.

The depth of the Shoulder dart affects also the fit of the basic neckline, where there should be no 'gaping', and of the armhole, which must be neat and fairly close fitting, without relying on artificial help, such as shoulder padding. Correct armhole fit must be achieved by a balanced combination of shoulder tightness and Shoulder dart.

Yet another important feature of the bodice block which is controlled by the size of the basic Shoulder dart is the **correct set of the grain of the material on the figure**, to which so much attention is paid in modelling. It is usual to place the lengthwise (or warp) thread down the length (or height) of the figure, while the crosswise (or weft) grain is set *horizontally* round the bust, thus dividing the top from the lower part of the bodice, and *distributing correctly the surplus contour-shaping fullness* between the Shoulder darts and the Waist darts (FIG. 10).

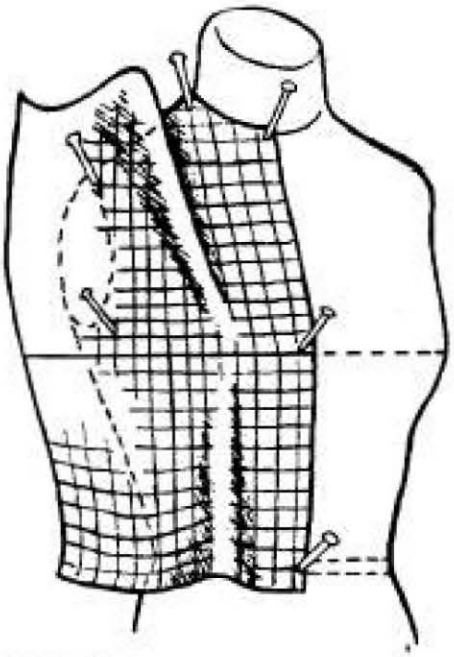


FIG. 10/II

To satisfy all these requirements of line and fit, of good shaping to the figure, close fit of neckline and armhole and correct set of grain, *it is necessary to use a fairly deep shoulder dart*. It is therefore useful to realize that there are other factors influencing the size of a basic shoulder dart besides the actual measurement of the bust. Moreover, the size of the dart depends as much (if not more) on the *shape* as on the size of the bust, and a prominent or high bust usually needs a deeper dart, even in a small size, while the reverse may be true for some of the larger figures.

In addition to all this, the shape of the figure as a whole, and in particular its posture, may influence the size, length and position of the dart, which can also be affected by style, fabric and, above all, by the general trend of fashion (e.g. squaring of shoulders reduces darts, closer fitting to figure increases them). Even the making-up technique is important, as can be seen from a comparison of dressmaking and tailoring, where much *shaping* can be achieved by manipulation, which reduces the necessity for deep darts.

Definite fashion changes, affecting the depth of the basic dart, may be taken into account and even incorporated in a block, e.g. a special trade or *fashion block*, whenever this is considered useful, and for as long as the fashion lasts. On the other hand, methods of increasing and decreasing the basic dart for special style effects (for the closer fit of a strapless bodice, or for the casual looser fit of a sports blouse) belong to the general technique of pattern designing and block manipulation, and are discussed elsewhere in the book (see sec. 6, Chapter III). In the construction of the basic block it has always been found more convenient to ignore all these passing fashion changes in favour of a standard line and fit, based more directly on the natural shape of the figure.

For a 92 bust of average shape a 7·5 cm Shoulder dart has been in use for a number of years and, having survived many fashion changes, has come to be accepted as a reliable proportion for correct bust shaping, correct set of grain and good fit of neckline and armhole.

The position of the Shoulder dart on the figure is governed by the position of the highest point of the bust, which, theoretically, is on the True Bust Line (see sec. 3) and at a distance of half Chest measurement from the CF. In practice, this is occasionally modified according to a special *check measurement* taken on the figure from the shoulder (from NP) as well as from the CF to highest point of bust. These supplementary measurements, though essential for some close fitting styles, are only additional check measurements in style adaptations, and are not considered sufficiently important to be incorporated in the basic bodice draft.

In practical dressmaking darts are seldom stitched to their full theoretical length, i.e. to the highest point of the bust (point X), but are usually made shorter. The long Shoulder dart is marked on the bodice block 2 cm above point X, and Underarm darts are shortened even more. But more often than not all darts are continued to the True Bust Line, i.e. to point X, in dart manipulation (see Chapter VI).

11. BACK CONTOUR SHAPING

In the back there is also some surplus fullness resulting from contour shaping, i.e. fitting material over the curve of the shoulder blade and the top of the spine; but it is considerably less than the fullness of the front bust dart. Only **a very small dart** would be necessary to control it, and this being the case, it is possible to omit showing the dart altogether, and to dispose of this fullness inconspicuously.

In this bodice block this fullness is represented by **the extra length of the back shoulder**, which can be eased into the front shoulder rather than taken out in a small dart. The average depth of this 'invisible dart' is 1·5 cm; but it increases for figures with prominent shoulder blades which are not connected with the *size* of the figure (as the bust is), but only with its *posture and shape*. Hence the possibility of fixing this small dart to a standard size for average figures without grading it for different sizes, and increasing it only in special cases (e.g. for round-shouldered figures).

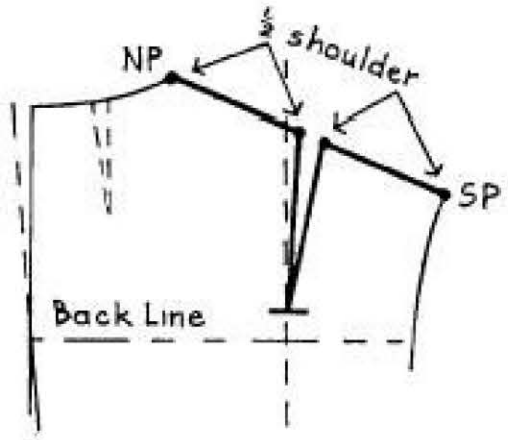


FIG. 11/11

When adapting the bodice block to different styles, it is generally convenient to use this fullness *as a real dart*, and to manipulate it in the same way as the Shoulder dart of the front (see Chapter VI). It is therefore most important to be aware of its existence, to be able to control it, and also to understand **the part it plays in the fit of the back.** Without this 'dart' it is impossible to pull up the back at the armholes, and to set the grain of the fabric correctly, i.e. in a horizontal line across the back; nor is it possible to have a neatly fitting back armhole. If control over this 'dart' is lost, it will appear as fullness in the back armhole, causing it to gape and generally spoiling its fit, as well as the fit of the sleeve.

When it is found convenient to *indicate this dart clearly on the pattern*, it can be drawn in as shown in FIG. 11. Measure half of the Shoulder measurement from NP, and the same from SP: the gap left between is the dart (1·5–2 cm). Draw it 8–9 cm down from these points, slanting it a little towards CB, the two lines meeting above the Back Line (approximately at two-thirds of its length from CB). Sometimes dart is nearer to CB.

There is also a little ease in the back neckline which can be considered as part of the contour shaping fullness of the back. It is not very evident on the average modern figure, but becomes more noticeable with the use of the Slanted CB, which widens the neckline and so adds to this fullness. A very small dart (0·6–1 cm) is sometimes used, especially with the Slanted CB (see FIG. 11). More often the fullness is simply eased into the neckline.

12. WAIST SHAPING

The method of tightening the waist in the bodice block is based on a well-established general principle of good fit, which is that any appreciable reduction in the size of a garment **must be well distributed.**

As applied to the waist, this means that the surplus fullness known as Waist Reduction (WR) must be taken out 'or reduced' at as many points round the waist as possible, or as the style permits. Only in this way can one avoid overshaping, which causes unsightly creases, drags, folds and fullness above the darts.

The overshaping of the side seams, for instance, due to excessive taking-in of the waist at the sides, results in such well-known defects as diagonal *tight* folds (or drags) from shoulder blade to side waist in the back, and from bust point to side waist in the front, defects which are difficult to correct without re-planning the whole waist suppression. The overshaping of the Waist darts can also be quite troublesome, as it makes the stitching of these darts and their inconspicuous finishing-off more difficult.

The secret of obtaining a neat, close fitting waist without risking these defects lies in planning ahead and in providing ways and means of *reducing the amount to be taken out at each particular point* to a manageable minimum. This can be achieved only if the number of such 'reduction points' is sufficiently big, to allow the total WR to be well distributed all round the waist, without leaving too much to be dealt with at any particular point.

It is easy to see, by actually testing on the figure, that if one tries to take out all the surplus fullness in the side seams creases immediately appear, and the fit of the bodice is spoiled. With such testing it soon becomes obvious that the addition of waist darts is essential. The introduction of the **Slanted CB and CF**, which are really **concealed darts**, makes it still easier to avoid overshaping, because the Slanted CB and CF make the basic Waist darts less deep.

There are, therefore, **eight basic points** at which it is possible and convenient to **reduce the waist**: in the two side seams, in the four Waist darts and on the CB and the CF (FIG. 12). When a tight fit of the waist is required, it is best to make use of all these possibilities. When a garment is only semi-fitting this is not always necessary, but often advisable in order to achieve a smooth, well-shaped line, which follows the outline of the figure without moulding it (e.g. the semi-fitted Princess line).

It must be made clear at once, however, that because of the shape of the figure, *the total WR cannot be divided equally* between the eight waist reduction points. The biggest amount is always suppressed in line with the biggest curves of the figure, i.e. under the bust and under the

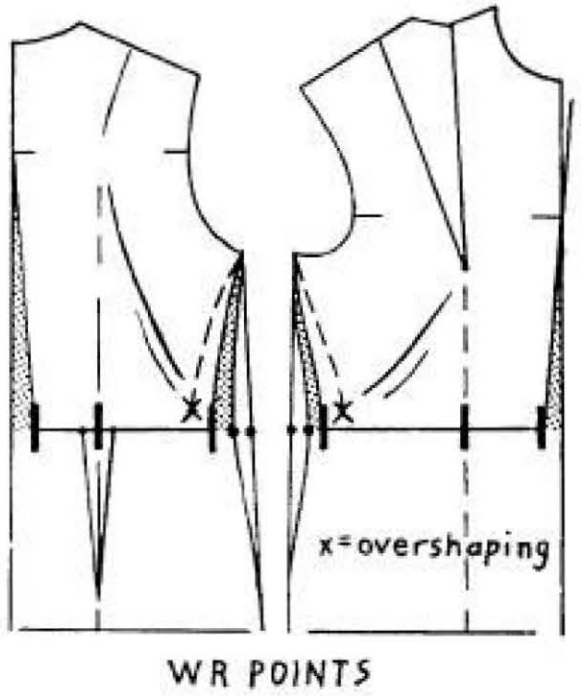


FIG. 12/II

shoulder blades. The side seam follows a lesser curve of the figure, and so can usually take only a smaller amount of WR; while the CB and the CF (particularly the latter) are still flatter and can therefore deal with only a limited amount of waist suppression.

The most convenient method is *to fix* the amount of WR for the side seams, where the danger of overshaping is greatest, as well as for the Slanted CB and CF; then let the Waist darts deal with all the WR over and above these fixed quantities.

Owing to the fact that individual figures vary in shape, it may be possible in some cases to increase the fixed amounts of waist suppression, for instance to take in the waist more at the side seams, without spoiling the fit. This, however, can be done with safety *only at a fitting*, when the results of the increased shaping can be checked at once on the figure. In fact, the **standard distribution of the WR**, as given in the bodice block, often **has to be checked** and adjusted on individual figures at a fitting (e.g. some figures, owing to their shape, cannot have a Slanted CF, while others need a less slanted CB).

The position of the basic Waist darts is governed by the position of the main curves of the figure: since the bust and the shoulder blade are the most prominent parts, it is in the hollows below them that most of the waist shaping is done. It is here, therefore, that the *basic darts* are placed, *in line with the highest point of the bust and shoulder blade*, which approximately works out at quarter Back width and quarter Chest width from CB and

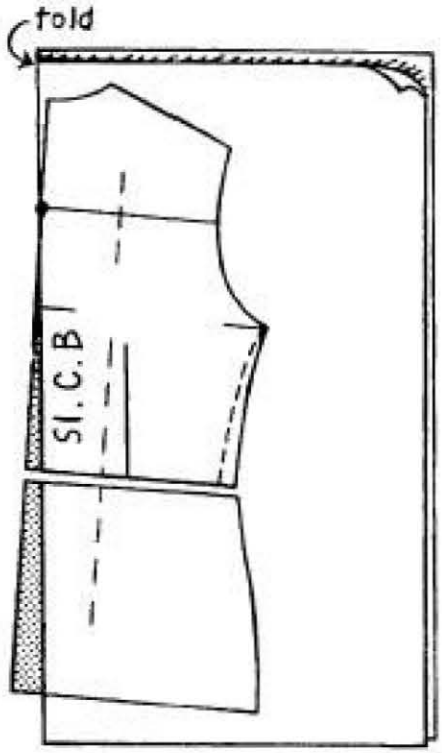


FIG. 13/II

CF respectively. It must be understood, however, that in pattern designing basic darts may not only be *divided and used in many different ways* (as tucks, folds, gathers, etc.), but can also be *moved* from their basic positions, according to the requirements of the particular style, the shape of the individual figure and the general fashion trend.

The lines which determine the position of the darts (passing through the highest point of bust and shoulder blade) are also the lines followed by the **Panel seams**: these connect the Shoulder and Shoulder blade darts with the Waist darts, and continue down to the Hip Line or lower (see Chapter VI). Because of their position they are **the classical seams for outlining the shape of the figure.**

The Slanted CB and CF lines indicate the amounts of surplus waist fullness which can be suppressed on the CB and the CF. Each outlines half of a *concealed Waist dart*, i.e. of an amount by which the waist can be reduced at these points without the use of a visible dart.

The amount marked off by the Slanted CB (CF) is either *concealed in a CB (CF) seam*, when the style shows one; or simply *cut away in the pattern*, which is then placed with its Slanted CB (CF) to the fold of the material. The surplus waist width is thus lost in the pattern, without making it necessary to use either a seam or a deeper dart in the garment. Note that in such cases the existing Waist dart is used parallel to *new* CB (FIG. 13).

These alternative CB and CF lines become particularly important when close-fitting styles are fashionable, though at all times their use is part of the pattern designing technique. It must be noted that the use of these slanted lines reduces the width of the bodice on the level of the True Bust Line and lower, and so results in a *tighter fit of the bodice all over* (see sec. 1 and 3, and FIG. 4). It also widens the neckline, so that it may be necessary to reduce it a little by small darts or by easing.

If, for some reason connected with the details of the design, the Slanted CB (CF) cannot be used, and yet a close fit at the waist is required, the value of these 'concealed darts' is simply added to the basic Waist darts, increasing their depth, and the ordinary CB (or CF) is used instead (see sec. 9 and FIG. 18, Chapter III).

Sometimes the Slanted CB can be 'reduced', leaving, for instance, only half of its dart value on the CB and either adding the rest to the Waist dart or 'losing' it to increase the finished width of the bodice back waist (see page 105—matching of side seams).

As will be seen from examples given in later chapters, in practice the basic principles of waist shaping explained above can be applied in many different ways, to produce a great variety of style effects, some of which belong already to advanced pattern designing.

CHAPTER THREE

USING THE BODICE BLOCK

INTRODUCTION TO PATTERN DESIGNING

The first step in pattern designing is to prepare an exact copy of the block from which the pattern of any style can then be developed. This can be done:

(*a*) by **tracing the block through** transparent paper, or
(*b*) by **outlining the block** on paper of any thickness.

Each method has its advantages and disadvantages, and a combination of the two methods is often convenient.

If the block is to be *outlined*, either because transparent paper is not suitable or not available, it must be made of thick paper or thin cardboard, so that the pencil can be run easily round the edge. This is a quick method which ensures a correct, well-shaped outline, provided the pencil is sharp and kept well to the edge (to prevent increase in size), and all the important points (SP, NP, etc.) are marked by dotting them clearly or by crossing the lines. Inner lines and details (e.g. darts, Bust Line, Chest Line, etc.) are marked either through holes pierced in the block pattern or just beyond the outer edge of the block. On removing the block these points are connected by ruled lines. This is a neater way than using the tracing wheel, which spoils the block very quickly.

If the block is *traced through* transparent paper, greater care must be taken to produce a well-shaped outline, and neatness in work is essential. With this method, however, the transfer of the inner lines and details is very simple and quick.

The choice of method will depend on various circumstances and to a considerable extent on the conditions and class of work. In mass production, for instance, all patterns must stand up to much handling without losing their shape and size, and thick, strong paper is the obvious choice. On the other hand, soft, thin paper is malleable and so particularly suitable for pinning up into 'models' which, when placed on a dress stand, can be checked and can have adjustments of fit and style made at an early stage. This makes the use of thin paper convenient for individual pattern designing, and more especially for original style creating. It is also best for teaching pattern designing and style interpretation, since the work of a student can be checked on a dress stand at all stages, and the final result, i.e. the garment, can be visualized more easily from a 'model' than from a flat paper pattern.

Where problems of both designing and large-scale production are involved, a combination of both methods suggests itself. The original model pattern can be made in thin paper and pinned up for testing on the dress stand even before the style is finally tried out in fabric. Once the design is approved for production, a pattern incorporating all the modifications made at the designing stage will have to be made in thick paper and adapted by suitable notching, provision of turnings, etc., to the production methods of factory or workroom.

It is therefore clear that no single method suitable for all conditions of work can be established. In all cases, however, accuracy is essential, for a mistake even in one section of the pattern may affect the size of the finished garment quite noticeably. The warning applies, however, mainly to the measurements and proportions fixing the size and shape, i.e. *the fit* of a pattern. With proportions that control features of style, greater freedom and elasticity are permissible and often desirable, as will be seen from various examples in later chapters. To be able to distinguish between the two cases, i.e. to understand when exact measuring is important and when it becomes a limitation, is essential for good craftsmanship in pattern designing.

When developing patterns of various styles from the block, it soon becomes apparent that there are certain well-established methods of block manipulation which are constantly used, whatever the style. It is useful to know something about these methods in a general way, and to understand their effect on the construction of patterns, for this gives a valuable insight into *the many possibilities of pattern designing on the flat*. Some of these methods will now be explained.

1. LENGTH OF THE BODICE BLOCK

A bodice block can be used to develop patterns of any length: to the waist or below, right down to the hips or even lower, and also to any reasonable line above the waist. It is not necessary to outline the block to the Hip Line if only a few inches below the waist are required for the style; but it is often more convenient to do so—for the easier marking of darts, for example—and to cut away later the length which is not required.

2. EXTENSIONS BEYOND THE OUTLINE OF THE BLOCK

Extensions of the pattern beyond the CB or CF lines may be necessary for openings, wraps, various cross-over

effects, revers and so on. For the simplest opening, with a row of buttons down the CF, there must be an extension to accommodate the buttons, as half of each button projects beyond the CF line, while the buttonholes *begin just outside the CF.* When outlining the block, sufficient paper must be allowed beyond the CF (CB) according to the width of the wrap required by the style or the size of the buttons. In the case of a fancy wide wrap or cross-over, the position of the *outer* point, farthest from CF, will usually indicate the additional width of paper needed.

For many styles extensions are needed above or outside the neckline of the block, above the shoulder line, beyond the side seam and so on. For instance, when using the Slanted CB or CF lines, extra paper is needed outside the block because these slanted lines extend in the upper part beyond the ordinary CB and CF (see FIG. 3/II). Some fancy necklines, raised or draped, may need more height and more width extending well beyond the original neckline. Extra paper left above the back shoulder is useful for moving the position of the shoulder seam (see 'Centre shoulder'—FIG. 17). Extensions must also be provided in various patterns for the addition of width under the arm, for example in some blouses.

In every case it is possible to add paper by pasting a piece where necessary. In most cases it is more convenient to leave this extra paper beyond the edge of the block *when outlining it.*

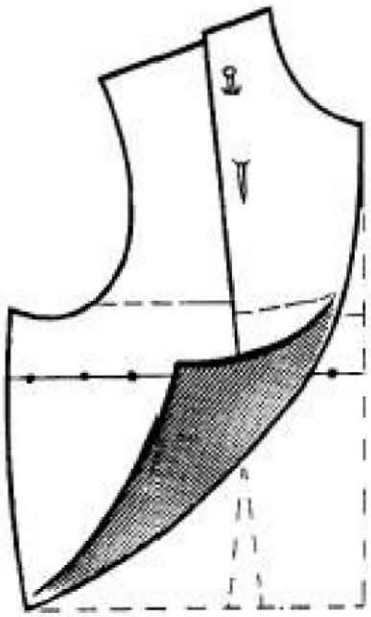
The few hints given above already show the importance of considering details of style and finish at a very early stage, i.e. even before outlining the block. With more experience one develops the habit of seeing a number of details at a glance, and learns to plan well in advance, i.e. to think of the cut, the fit, the fabric and the finish *while working on the pattern.*

3. USING THE BODICE BLOCK WITH SHOULDER DART CLOSED

It is often necessary to 'close', i.e. eliminate the Shoulder dart of the block in order to have a flat, *dartless* shoulder section for the more convenient planning of the fancy lines of a style.

As soon as the dart is folded out by bringing its two lines together, *the pattern can no longer lie flat.* It reproduces now the contour shape of the figure and it will fit a dress stand like the finished garment. This is convenient and even necessary for checking the lines of a style on a dress stand or on the figure. But, for the actual planning and drawing of the lines of the style, the pattern should preferably lie quite flat on the table.

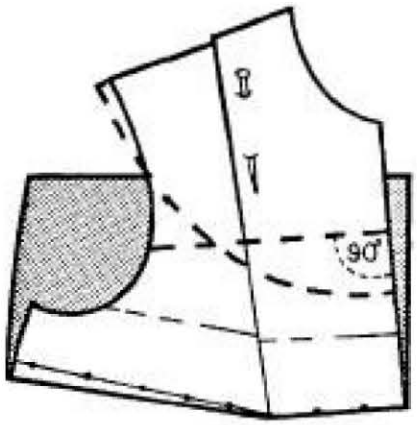
In the case of many simple designs it is possible to work with the dart closed and pinned, without first getting the pattern to lie flat. The edges can be allowed to stand up in one part, e.g. lower part, while lines are drawn in the upper part, or vice versa (FIG. 1).



PATTERN WITH DART PINNED

FIG. 1/III

Or the pattern can be folded in two *through the Dart Point* so that only one part at a time is available for the planning of the design (FIG. 2).

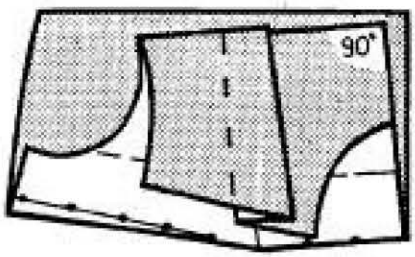


FOLDED THROUGH DART POINT

FIG. 2/III

A simple straight yoke, for example, can be quickly planned in this position, and its lower edge marked by folding the CF of the pattern back on itself to obtain a crease at right angles to CF (FIG. 3). The method of marking lines by folding pattern at right angles to CF, CB or to some other line, is both quick and accurate.

In diagrams it is impossible to show correctly the bodice front with the Bust dart pinned, because such a



FOLDED FOR YOKE LINE

FIG. 3/III

pattern *cannot lie flat*. Therefore, one generally has to use a *simplified*, conventional representation, which consists in showing the bodice front *as if flat*, yet with Shoulder dart pinned (FIG. 4). A more *realistic* representation would make it very difficult to show clearly the planning of the style lines (see first steps in Plates 6 and 7, Chapter V).

Another method of dealing with this problem is given in the next section.

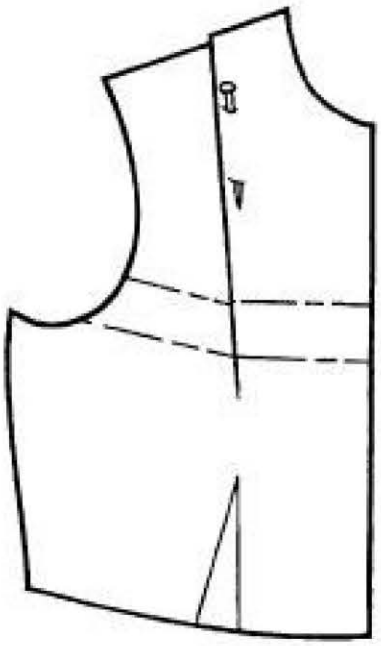


FIG. 4/III

4. TEMPORARY REMOVAL OF SHOULDER DART (Temporary Slash)

In many styles it is more convenient, as a preliminary step, to 'move' the Shoulder dart out of the way to some other position, either *permanently*, if the style clearly indicates another position, or *temporarily*, in order to facilitate the planning and drawing of the style lines in a part where a dart would be in the way.

The pattern is cut on the True Bust Line from the underarm to Bust point X, and the Shoulder dart is folded out *to the same point* and pinned: the underarm slash then opens out. The gap shows the **Shoulder dart fullness in a new position**, where it is not likely to interfere with the drawing of the style lines. When the planning of the style lines has been completed the dart can be *moved back* to its original position by simply unpinning the Shoulder dart, closing the underarm slash and securing its edges with strips of gummed paper or in some other way, such as pinning or pasting a strip of paper underneath. From now on this **'temporary slash'** plays no further part in the development of the pattern and can be ignored.

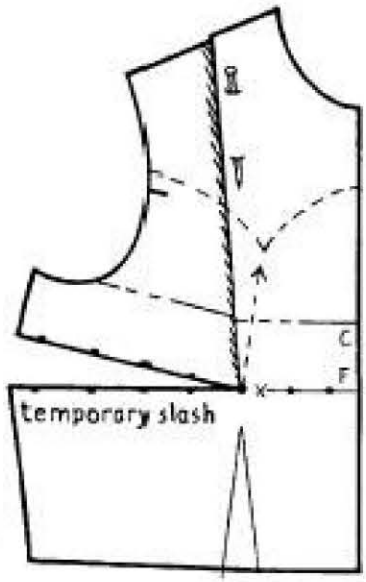


FIG. 5/III

A temporary slash is sometimes made in other parts of the pattern, e.g. from the waist. But the underarm is by far the most convenient place, as this is a *part of the bodice least affected by the planning of fancy lines.*

If, in the case of a design such as a 'Pointed' Yoke style, the fullness of the original Shoulder dart does not appear finally at the correct point it can always be 'moved' to the right or to the left and made to come *exactly where wanted.* This is done by means of a *new slash* to the Bust point, into which all the fullness of the original dart is transferred (see 'Pointed' Yoke outline and arrow indicating new line of slash in FIG. 5).

5. UNDERARM DARTS

When it is necessary to have a dart in the underarm, the original Shoulder dart is moved to the side seam exactly as described above (sec. 4). In this case, however, the fullness *remains in the side seam*, and there are various ways of dealing with it, the simplest being a slanted dart.

For **the single slanted Underarm dart** rule a straight line from a point 6–8 cm down the side seam up to the point of the Shoulder dart. Cut on this line and then fold out the Shoulder dart to its point, *opening a slash in the side seam*. Secure it by paper underneath. The slash represents the basic dart in its *new position* and gives its correct depth or width.

N.B. Note that it is not the same size as the basic Shoulder dart, but usually smaller.

Shorten the new 'dart' (i.e. gap) by 3–5 cm from the point of the Shoulder dart and from here draw the final Underarm dart as shown in FIG. 6a. The shortening is to make it less conspicuous, though in some cases a longer dart, almost to the end of the slash, is preferred. Closing the shortened dart for a moment, trim the side seam to a smooth unbroken line.

N.B. With underarm darts it is often possible, at least on small figures, to lose a little bust width when trimming the front side seam.

The slant of the dart may be increased by raising slightly its higher point along the Shoulder dart which is then closed to a higher level, i.e. itself shortened. The dart can also be placed higher or lower on the side seam.

The main problem created by underarm darts is the difficulty of making them run off neatly at the end, without producing a 'poke' or fullness whenever one tries to keep them well under the arm by shortening them. It is therefore an advantage when the darts are smaller, and in some cases they are artificially reduced in easy fitting garments (e.g. blouses).

The classical method to make underarm darts less conspicuous was to divide the dart into two, each no bigger than 3–4 cm, then to shorten them to about ¼ of the gap length, and to get rid of the fullness by manipulation, i.e. pressing and shrinking (FIG. 7). The lower of the two darts was planned equally each side of the lower edge of the slash, the higher dart was drawn above it by measurement, with a bigger distance between the points (3·5 cm) than the base of the darts on the seam (2 cm).

There are various other arrangements of the underarm fullness which are used according to style and fashion: one can have more darts or folds along the side seam, or combine them with some 'easing' or gathers, or drape the fullness, and so on. The so-called 'Slanted Underarm dart' (or diagonal dart) which starts at a point much lower down the side seam, is yet another popular way of dealing with this fullness. The dart slants upwards to-

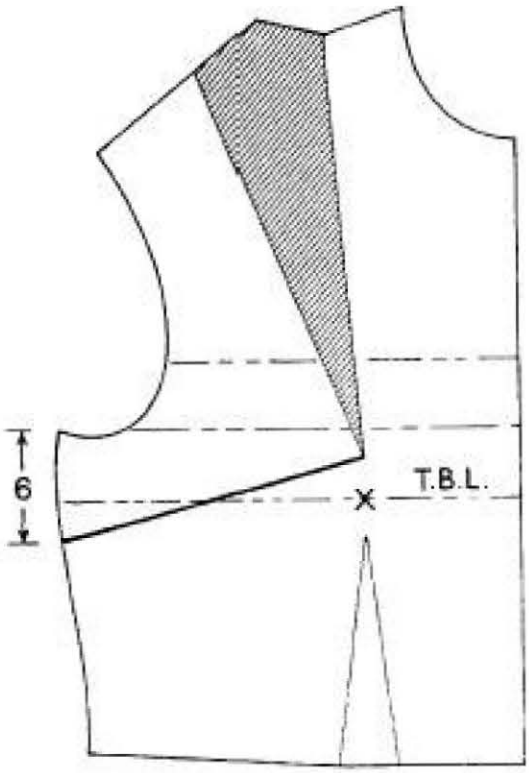


FIG. 6/III

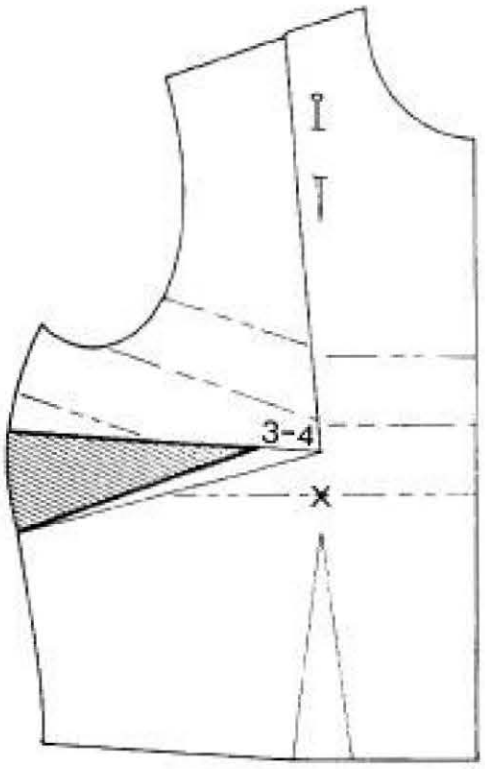


FIG. 6a/III

wards the Bust point (to X or a little farther out) and can usually be fairly long; because of this it can be also quite deep, including even part or the whole of the Waist dart when necessary (see example B in Plate 11, Chapter VI).

6. DIFFERENT WAYS OF USING THE SHOULDER DART

There are **several classical methods** of dealing with the Shoulder dart fullness when retained on the shoulder, in addition to various fancy ways to be mentioned later. The three best known methods are:

(*a*) using the dart as it is, i.e. stitching it to the point, or stitching it only half-way down (with some fullness showing at the end);

(*b*) gathering the dart;

(*c*) dividing the dart into smaller *unfinished* darts called 'dart-tucks'.

Gathers replacing a Shoulder dart take over its function in shaping the bodice to the curve of the figure, and the line on which the gathering is done is then slightly curved, becoming straight only when the gathers are drawn up. The curve is very slight, approximately 1·5 cm above the straight line, and its highest point is in the middle of the original dart (FIG. 8).

The gathered Shoulder dart, however, does not give much fullness by itself, and for fuller gathers *extra width* has to be added to the front of the bodice. With such an addition the curve of the shoulder line flattens out and to all practical purposes disappears, so that fuller gathers, gauging, smocking, etc. (even if the dart is included), is generally done on a straight (or almost straight) line.

Tucks can be of different construction according to whether they are ordinary **straight tucks**, which merely control *additional fullness*, or **graduated 'dart-tucks'**, which replace the Shoulder dart and so help to fit the bodice to the contour shape of the figure. In appearance they may be very much alike, but, while the ordinary straight tucks require an addition of *extra width* to the bodice, dart-tucks are obtained simply by splitting the existing Shoulder dart into two or more smaller ones, which are stitched only half-way down and so release some of the 'dart fullness' at the end.

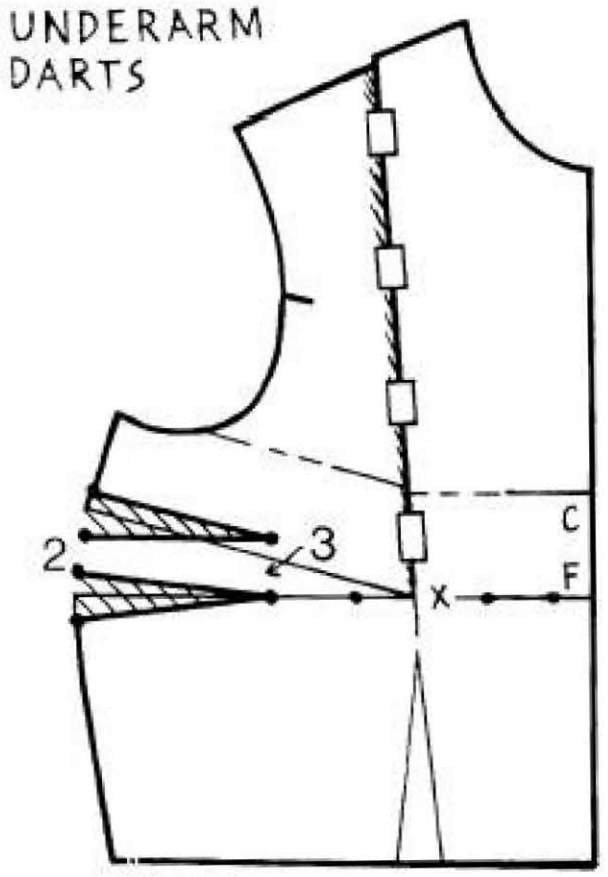


FIG. 7/III

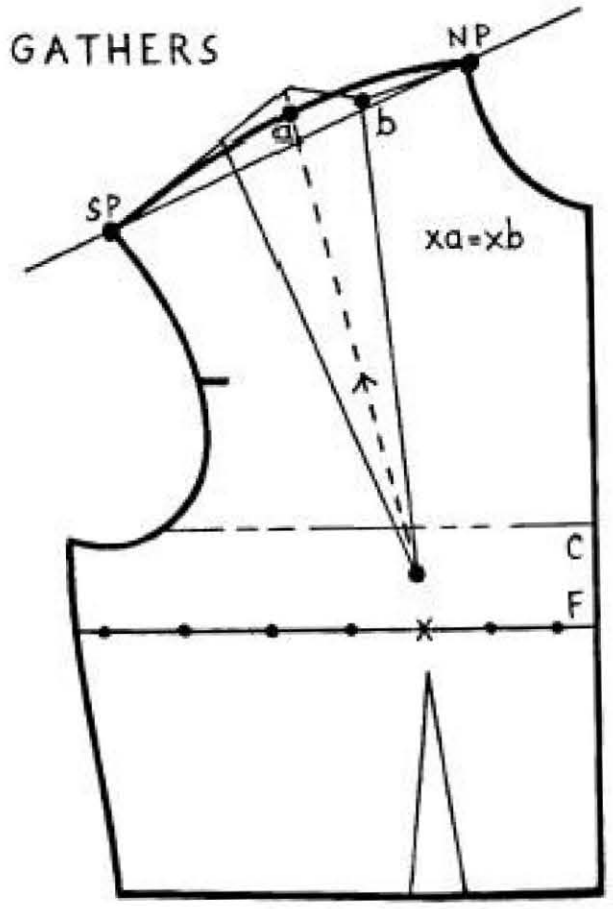


FIG. 8/III

It is not always easy to see from a sketch which tucks should be used, since their representation is so similar. In practice, the question is decided according to the type of garment and fabric, the figure, the style and, of course, fashion. It is one of the problems left to the judgement of the cutter. Generally speaking, if the number of tucks is small and there does not appear to be any extra fullness over the bust (where the dart runs off to nothing), dart-tucks can be used. If the style shows more than three tucks on the shoulder, and also some fullness over the bust, straight tucks are used, in which case it is generally more convenient to move the Shoulder dart to the underarm instead of incorporating it in the tucks (see Plate 4, Chapter IV).

The method consists in closing and pasting the original Shoulder dart of the pattern, after making a 'temporary slash' on the underarm; then marking the position of the dart-tucks by means of three parallel lines from the shoulder (FIG. 9). The middle one can follow the line of the original dart, the other two are drawn on either side of it, with a space of 2–2·5 cm between them. Their length is usually equal to half of the original dart, and from this level the three parallel lines are connected with the point of the original dart. Cut on the three lines, from shoulder down to Bust point; slip a piece of paper underneath and, by closing the underarm slash, let the three new slashes open out *equally* allowing one-third of the original dart (i.e. 2·5 cm) for each tuck. Pin or paste each strip to the paper underneath (FIG. 10).

It is advisable in such cases to prepare the copy of the block with a curved line above the shoulder, as shown in FIG. 8. This will also be found convenient in other cases when the simple Shoulder dart is not being used; whenever, in fact, the extra final shape of the shoulder of the pattern cannot be determined until the pattern, with its *new arrangement* of dart fullness, is completed.

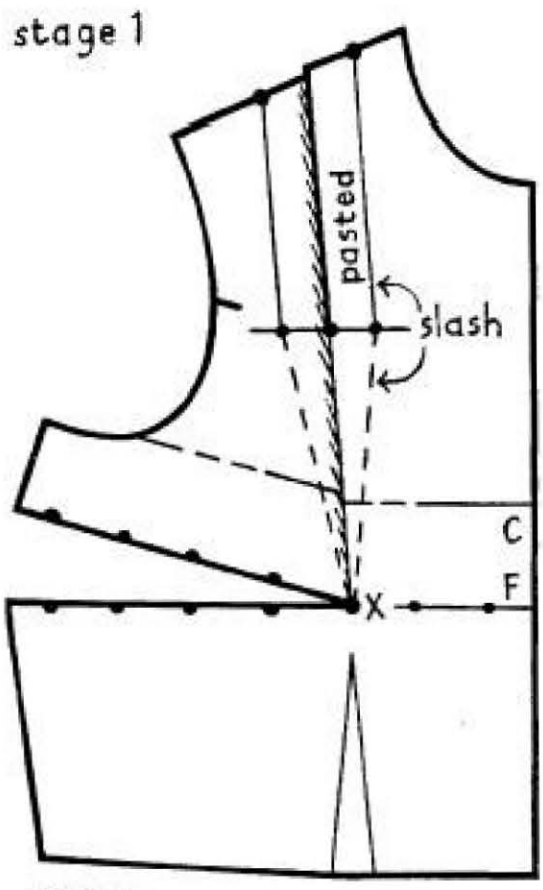


FIG. 9/m

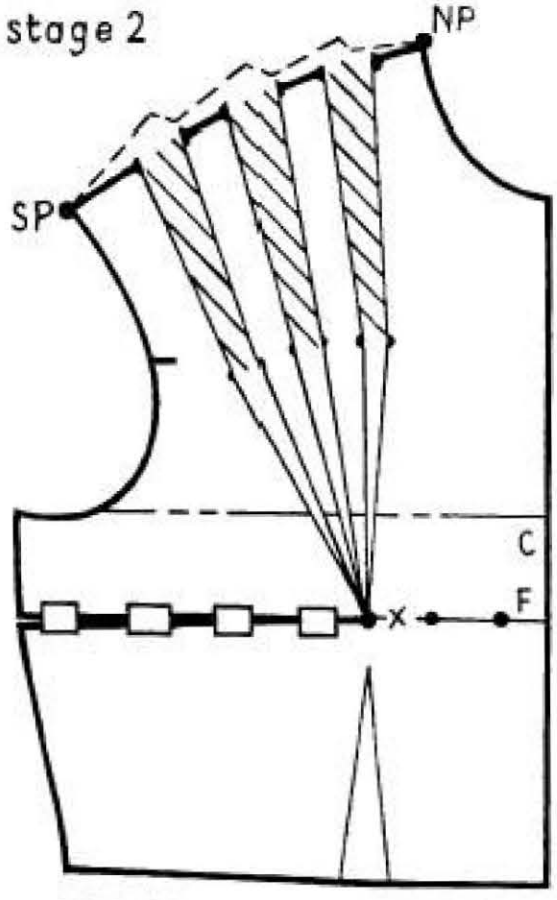


FIG. 10/m

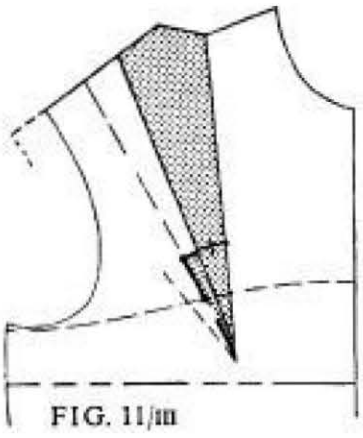


FIG. 11/m

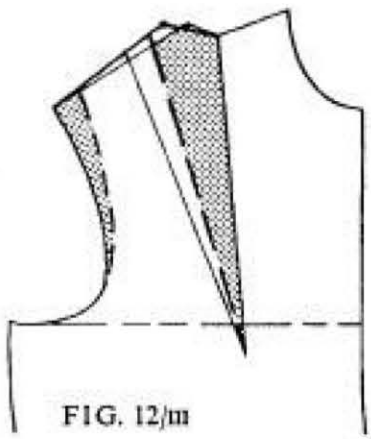


FIG. 12/m

Increasing Shoulder dart: It is sometimes necessary to increase the depth of the basic Shoulder dart in order to achieve a tighter and more clinging fit. This often happens in very close-fitting styles, such as 'strapless' bodices, swim suits, well-shaped undergarments and foundation garments (brassieres), most of which do not go up to the shoulder (hence the dart is usually increased in the lower part only). The Shoulder dart is made 50% bigger or even doubled by simply adding the extra width outside the line of the dart (FIG. 11).

Since the effect of enlarging the Shoulder dart is *to tighten the edges round the fullest part of the bust*, thus moulding the fabric closer to the curve of the figure, the method is useful for tightening top edges of low-cut bodices and also very cut out necklines (see also Chapter X). The enlarged Shoulder dart may be transferred into the underarm.

Reducing Shoulder dart: Sometimes it is advisable to reduce the depth of the bodice Shoulder dart in order to obtain an easier, less clinging fit in the upper part of the bodice. This may be necessary for a special style (e.g. an easy fitting blouse of the casual shirt variety), or for a certain shape of figure. The reduction is made by ruling a new *outer* Dart line 0·5–1·2 cm inside the original one; then shortening the length of the shoulder and re-drawing the armhole from the *new* SP. Such a smaller dart can usually be stitched a little shorter (FIG. 12).

7. ADDITION OF EXTRA WIDTH TO BODICE BLOCK

In pattern designing extra width may have to be added to the block either *for fit* or *for style*. The bodice block gives an average easy fit which can be varied a little in either direction by a different use of seams and darts. There are many garments, however, which must have a *looser fit* (most blouses, nightwear, overalls, etc.). There are also many styles which must have more fullness as part of their design, to provide for pleats, for tucks, gathers, etc. Different methods exist for increasing the width of the block.

Extra width for a looser fit can be added:

(*a*) at the side seams;
(*b*) through the shoulder.

The amount which can be added to the side seam (i.e. to each edge) is limited generally to 0·5–1 cm in blouses and dresses and up to 2–2·5 cm in overalls, loose coats, etc. In each case such an addition at the side seam *increases the size of the armhole*, and a larger sleeve must be used. Therefore the addition can be made only if a larger armhole and sleeve are suitable for the style.

When more than 3–5 cm of ease is necessary or, alternatively, a larger armhole is not wanted, some width can be introduced through the shoulder section, thus increasing the length of the shoulder (FIG. 13). This, however, is possible only if there is no objection to a longer shoulder.

In each case the addition can be only a small one; but that is usually sufficient to 'ease' the fit of the garment. For a bigger addition the style itself should be planned so that the extra fullness is *controlled* by tucks, gathers, folds, pleats or in some other way. In fact, *more fullness* can be introduced only *as a feature of design*.

When **extra fullness** is **a feature of the style** it can be added exactly where required. The amount will vary according to the style and also the fabric to be used, and may be considerable.

There are three different methods of adding width to the bodice (FIGS. 13, 14, 15 and 16):

Method 1 consists in cutting the pattern *where necessary* and inserting a strip of paper to introduce the extra width (FIG. 13). To ensure that the pieces of the cut pattern come together correctly, one can use the True Bust Line (or Bust Line) as a guide for matching them. A better method is to *fold out* the extra width added to one of the sections, by folding it back under its edge as a pleat (FIG. 14), and only then to add (pin or paste) the other section, after matching it correctly with the first. This is a useful method for any type of pattern—bodice, sleeve or skirt—and for adding any amount of fullness.

Method 2 consists in adding width beyond the CF (CB Line and then moving out the CF (CB) Line, as well as the NP, by the same amount along short horizontal lines. This ensures that the relative position of the various construction points is not altered, the neckline remains the same width and the extra width is actually added through the shoulder, making it longer (FIG. 15). The method is quick, but useful mainly for smaller additions.

Occasionally this method is used at the side seam and armhole, these being re-drawn on the same level but farther out, thus adding width to the front.

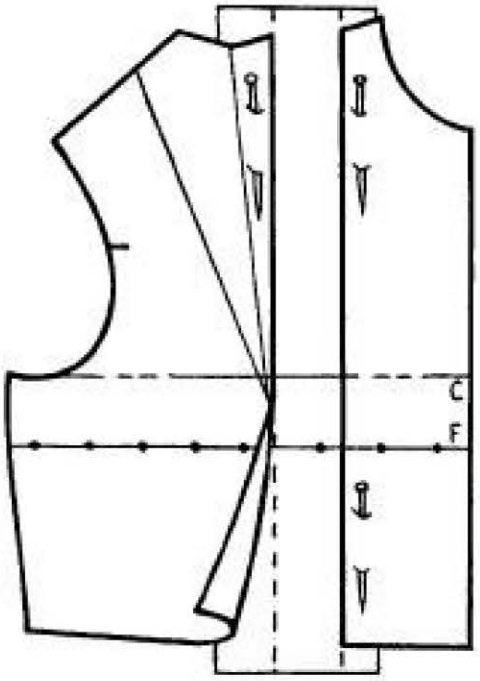


FIG. 13/m

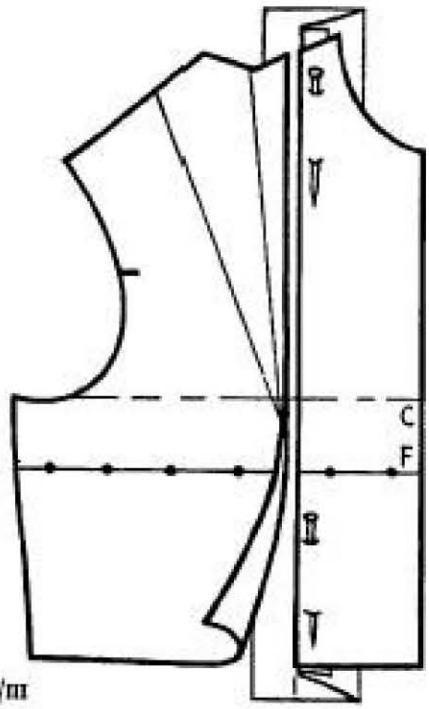


FIG. 14/m

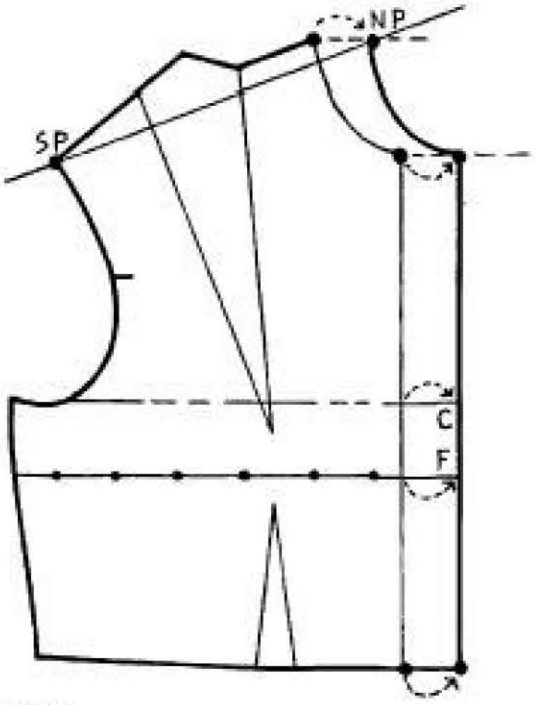


FIG. 15/m

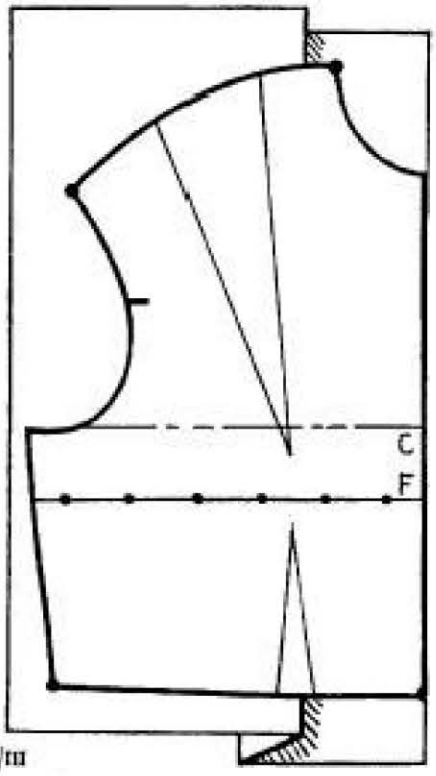


FIG. 16/m

Method 3 consists in outlining the bodice block on a sheet of paper in which a 'pleat' has been made to allow for the extra width to be added (FIG. 16). After outlining the block over the 'pleat' it is opened out, adding width where required (the pleat must be placed correctly before outlining). When pleats are actually a feature of the style it is often convenient to plan them and fold them in the paper before outlining the block over them.

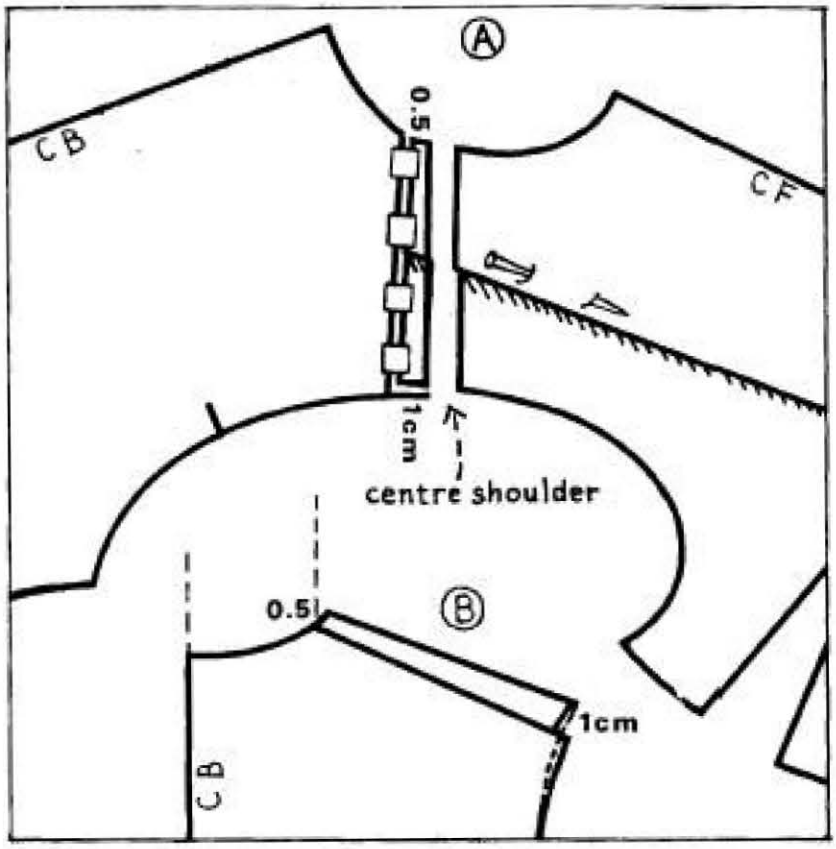


FIG. 17/III

8. CENTRE SHOULDER SEAM

In some styles it is important to have the shoulder seam exactly in the middle of the shoulder. It can be 'moved' from its usual position, which is very slightly to the back, by adding to the back shoulder 0·5+ cm above NP and 1+ cm above SP and re-drawing the seam; the same amount is then taken off the front shoulder (FIG. 17).

This does not change the fit of the shoulder, i.e. its tightness, but merely alters the 'run' or line of the seam (examples in Chapters V and VI).

The Shoulder dart on the front must be closed (pinned) before the Centre shoulder seam can be drawn across it from a point 0·5+ cm below NP to a point 1+ cm below SP, and the top piece is then cut away. This cut-away strip can be added (pasted or pinned) to the back shoulder, as shown in FIG. 17/A.

Another method is to allow the necessary addition above NP and SP in the back, *when outlining the block* as shown in FIG. 17/B.

9. WAIST SHAPING

The various lines and darts provided for the shaping of the waist, including the Slanted CB, CF and the 'inner' side seams, are not all necessarily used in every block adaptation. Different combinations are possible, achieving a variety of effects, and correct style interpretation and good fit depend considerably on the method selected.

For a neat waist fit in an average dress style, the inner side seams, the Slanted CB and in many, but not all, cases the Slanted CF are used. Often, however, the Slanted CB and CF are unsuitable for the style, and their waist reduction value is then added to the existing Waist darts, thus making them deeper. This addition is made equally on both sides of the dart (FIG. 18).

When using the Slanted CB it is usual to move the basic Waist dart farther out, making its centre 'guide line' (or construction line) run parallel to the new, i.e. Slanted CB (FIG. 19); if this is not done the finished darts on the garment may come too close together. In the

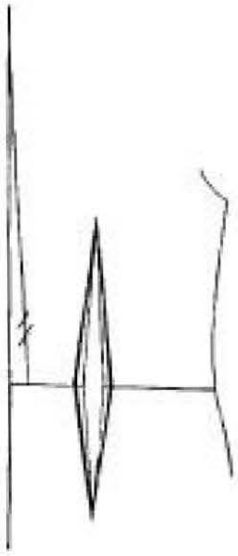


FIG. 18/III

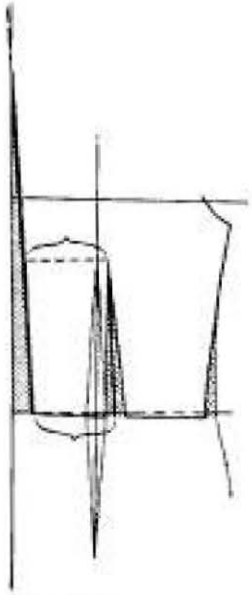


FIG. 19/III

front, where the basic Waist darts are not so close together, they are less affected by the Slanted CF: so that here this problem seldom arises.

For a tighter waist fit, everything that the block provides for waist shaping must be used, and the usual Waist darts may even have to be increased a little (see example in Plate 3, Chapter IV). It must be remembered that such tightening of the waist will also make the whole bodice above the waist tighter (see sec. 1 of Bodice Analysis, Chapter II). For a still closer fit, for example in many evening dresses, the bodice may have to be taken in more at the sides, and new inner seams drawn inside the original ones. These cases, however, belong to more advanced pattern designing, which is beyond this stage of simple rules and methods of block manipulation.

It may be a useful reminder to repeat that the Slanted CB and CF project at the top beyond the original CB and CF, and therefore when outlining the block provision of extra paper is necessary.

10. ARMHOLE AND SLEEVE

As the connection between the armhole and sleeve is quite obvious, anything altering the size of the armhole, for example addition of width at the underarm (for blouses, etc.) requires the sleeve to be made larger to correspond, and vice versa. Since the width of the sleeve usually goes with the style of the garment, one cannot alter the armhole unless a looser (or occasionally tighter) sleeve is suitable.

11. WRAPS AND FACINGS

Wraps and Facings are important style details which often have to be considered at an early stage.

A Wrap is interpreted both as a feature of style and as a functional detail, i.e. it must have a good line and also be suitable for the method of fastening. The first is more important in fancy wraps, which are planned like any other feature of the style, any buttons being added later (see Plate 5, Chapter IV). But in the case of simple wraps, in styles opening down CF (CB) the very width of a wrap may be largely determined by its functional aspect, i.e. by the method of fastening, and even by the size of the buttons.

A simple straight wrap must be wide enough to allow for half of the button diameter and usually half as much again, if the button is not to stick out beyond the edge. Very small buttons usually come farther in from the edge (see 'Box Pleat' opening, Plate 2, Chapter IV). The reason why 2–2·5 cm wraps are so usual is that they are suitable for a big range of popular button sizes.

A Facing is generally planned on the finished pattern and then *traced through* to make a separate pattern. On the fabric it follows the same grain as the part which it must 'face'. Most facings, particularly all those in styles with revers, go up to the shoulder, where they can be caught on to the shoulder seam. Some facings are cut not only to cover a turn-back rever but also to include a collar cut all in one (see Rever-collar, Chapter X). Whatever its shape, a facing provides a *second layer of material* for buttons and buttonholes, and must always be wide enough for this purpose.

12. BUTTONS AND BUTTONHOLES

When buttons are sewn exactly on the CF Line the buttonholes on the opposite edge are usually planned to begin a little beyond (i.e. outside) the CF Line (0·3–0·5 cm) to accommodate the thickness of the button shank.

A simple method of planning well-spaced buttons is to determine from the sketch and then to mark on the pattern the position of *the highest* and *the lowest* button; then to divide the space between them into as many equal sections as there are buttons *minus one*, e.g. for five buttons into four equal sections.

The correct planning and spacing of buttons at an early stage often helps to determine correctly the position of other points or details of the style, and to avoid such technical mistakes as getting a buttonhole in line with the edge of a yoke. In the case of a row of buttons placed fairly close together, the usual method is to decide on the space between the buttons according to their shape and size and then, starting from the top, to mark as many buttons as will fit into the remaining length.

CHAPTER FOUR

SIMPLE PATTERN DESIGNING

ILLUSTRATED BY FIVE SIMPLE STYLES

GENERAL REMARKS ON PATTERN DESIGNING

As an introduction to Pattern Designing it is useful at this stage to give a few general hints on how to 'read', i.e. to understand, fashion sketches, and how to interpret them correctly in patterns. These hints will apply to all styles and to all types of garment. They are not definite rules but merely useful suggestions for developing a systematic, constructive approach to style interpretation.

1. Before beginning to plan a pattern, one should always **study the fashion sketch** very carefully and try to understand it, i.e. to visualize the construction of the style it shows. If there is a description, one should not omit to read it, as it often gives a useful hint.

2. The question of darts and other **technical details connected with shape and fit**, e.g. tightness of waist, ease or fullness over the bust and so on, are very largely left to the judgement of the cutter, who must make a decision on these points, bearing in mind the shape of the figure, the style details, as well as the fabric to be used. Thus, if a sketch does not show a dart, this does not mean that no dart can or should be used: it would be a very bad mistake indeed to ignore the contour shape of the figure simply because the sketch does not indicate how it should be dealt with. The problem of *fitting the principal curves of the figure*, i.e. the bust and waist, *must be considered in every case* before planning the lines of a pattern.

3. Studying a sketch, one can often work out the **correct position of various style details**, such as the depth of a yoke or the width of a panel, by measuring them in one's mind against a line, the length of which is either known or easily measured. Such **'measuring lines'** are the CF, the CB, the Shoulder. A sketch may show a yoke the depth of which appears to be a quarter down the CF (between neck and waist), or a panel starting from the middle of the shoulder or from one-third of its length—a length which is known. All these proportions can therefore be reproduced quite correctly on the pattern.

4. The position of various style details can be quickly **established by referring** them **to parts of the figure** (nape or base of neck, level of bust, shoulder blade and so on) or **to parts of the bodice** which have a definite position on the pattern, such as the armhole or the shoulder dart.

5. Some points and lines (mainly Panel lines, position of pockets, etc.) can be located by **judging their distance from CF and CB** along the principal construction lines, the length of which is known for every figure (e.g. halfway along Back Line or Chest Line).

6. **All construction lines of the block** can be used with advantage **for reference** and for the correct planning of various style details, provided they are not treated theoretically, as mere lines of the drafts, but are actually *connected with definite parts or levels of the figure*. This does not apply only to the Waist Line, which is constantly referred to by all cutters, but to other construction lines as well. Thus, the Chest Line, which is approximately one-third down the front, is frequently referred to in planning yokes, buttons, revers, depth of neckline and various fancy lines and trimmings. The Bust Line, 4 cm lower, 'divides' the front horizontally into the upper and lower half (approximately); while 4 cm below that the True Bust Line indicates the highest part of the bust curve, i.e. the part of the figure where all the darts converge (at least in theory). The Back Line is just over a quarter down the CB length and comes a little above the most prominent part of the shoulder blades. All these are useful facts to remember in pattern designing on the flat, for, in working away from the figure, one is apt to forget that a style is well designed only if all its lines and details *look right on the figure.*

7. The width and length of some trimmings, such as pleats, bands, edgings, can often be estimated correctly by comparing them with other **trimming details** of the design which are **of known average proportions**. For example, pleats under a shoulder yoke may be equal to or narrower than a CF 'Box Pleat', the *usual* width of which is 3–4 cm.

8. Many style details, such as pockets, pleats, yokes, etc. follow more or less **established proportions**, which can be described as their 'usual size' or 'usual position', and which are soon learnt by experience. These become, in turn, standards for working out other, less usual proportions noted in fashion sketches, such as 'outsize' pockets, extra wide pleats or extra deep yokes.

The most practical advice which can be given to all students of pattern designing is to *test patterns as much as possible on the figure* or on the stand. It is useful to develop the habit of experimenting with various proportions, such as depth of necklines or of yokes, width of

panels, etc., by trying them out on oneself and learning to *judge the effect in front of a mirror*, while the work of planning the pattern is still proceeding.

A finished pattern with all the lines planned should be checked in the same way. After drawing the style lines very clearly, preferably in coloured pencil, so that they show up well even at a distance, pin up the darts and place the pattern on the stand, or hold it against your figure, and then survey the whole effect in a mirror, standing some distance away from it. Badly planned lines and proportions soon become apparent, and it needs but little practice to learn to see one's mistakes at an early stage when they can still be easily rectified. It is the best way of developing an eye for good line and proportion, and also the quickest way of improving taste and judgement, both essential to good pattern designing.

The general procedure in designing a style pattern is briefly as follows: after outlining the block and cutting it out, allowing any necessary additions beyond the CF, above the neckline, below the waist and so on (as required by the style)—

a—decide at once *how* and *where* the Shoulder dart fullness will be used;
b—consider the fit of the waist;
c—pin the Shoulder dart if it is not to be used on the shoulder or if you want it out of the way while planing the style lines;
d—transfer Shoulder dart temporarily to the underarm or permanently to a new position (pasting it); or in simple styles, such as yokes, etc., work with dart pinned, without transferring it (see Chapter III, sec. 3, FIGS. 1, 2 and 3);
e—plan the various lines of the style;
f—cut the pattern on the style lines, where necessary;
g—return the dart to the shoulder from a 'temporary' slash;
h—plan any *new dart arrangement* required by the style on the shoulder or in a new position, and also at the waist (if not as on the block);
i—complete **the 'marking' of the pattern**, i.e. draw all the necessary 'Balance Marks' (for the setting-in of sleeves, for the placing of gathers and ease, for joining yokes, panels, etc.); indicate the CB, CF and the *fold* of the material (when the pattern is to be placed 'to the fold' instead of being cut twice); show by arrow lines where the Straight Grain (SG) of the fabric comes.

The various sections of the cut pattern (or most of them) are usually re-cut in new paper for **the final pattern**, but this is not essential, and many parts of **the 'construction pattern'** can be used as they are.

This is only a very simple outline of the work involved in developing a style pattern, and it will be easily understood that often a change of procedure may be necessary or advisable for a more elaborate style or in a special case.

FIVE SIMPLE STYLES

The five simple styles which follow are introduced mainly as illustrations of the basic methods of block manipulation described in the previous chapter. Being classical styles, they make a good introduction to pattern designing, because correct interpretation and careful planning of details in simple, well-known styles is as important as in more elaborate ones. Pattern designing can never be done according to set rules, but in every case the first essential step is correct *'style reading'*, i.e. style analysis. A few words of explanation will therefore be given to show a suitable *approach* to each of the five styles, and to indicate what each of them basically represents.

The Cardigan in Plate 1 is an example of **a semi-shaped style**, neither loose nor close fitting. It illustrates the use of the Shoulder and Waist darts more or less as they are on the block, but less tight than in a dress (normally requiring Waist + 4–5 cm): a cardigan of this type needs about 5–7 cm more ease, i.e. Waist + 10–12 cm.

Apart from that the pattern is almost identical with the block, except for the addition of a simple wrap to the CF, the adjustment of the length, the planning of buttons, buttonholes and pockets. All these details can be varied slightly without affecting the basic cut, e.g. the cardigan can be longer or shorter, the pockets larger or smaller, placed higher or lower and so on.

The other style in Plate 1, **the sleeveless jerkin**, is a garment **without any waist shaping**. It is quite straight and loose fitting round the waist and illustrates the effect of omitting the waist darts of the block altogether.

The Shirt Blouses in Plate 2 are examples of **easy fitting styles** which can be more full or less full round the bust. Of course not every blouse is necessarily an easy fitting garment: some are quite close fitting and use all the shaping indicated on the block (see Plate 3). However, a blouse of the 'shirt' type, whatever its details, generally has more width round the bust than is provided by the block.

When blouses are fashionable it is useful to have a special **Blouse block** with extra width added on the Bust Line level, with the length cut to one suitable for tucking into the skirt, and with a simple wrap added beyond the CF for an opening with buttons and buttonholes (FIG. 1).

A *standard method* of adding blouse width consists in distributing 4–5 cm extra round the bust by introducing half of this amount through the shoulders (front and back), making them 0·5 cm longer; and the other half on the side seams (0·5+ on each edge), making the armhole 1 cm larger. A longer shoulder and larger armhole (with a wider sleeve) are usual features of easy fitting blouses

particularly of shirt styles, and so are quite suitable for a Blouse block.

The addition of width through the shoulder is made by one of the methods described in sec. 7, Chapter III. Method 2 (FIG. 15/III) is more convenient than Method 1 (FIGS. 13 and 14/III) because such a small amount (0·5 cm) is more easily added beyond CF and CB than introduced by slashing. The addition on the sides is made quite simply—on the seam.

To complete the Blouse block, reduce the length to 15 cm below the waist and add a simple 2–2·5 cm wrap.

This Blouse block is suitable for a variety of styles, with or without fullness on the shoulder (see blouse B—Plate 2). When a style has fullness, e.g. tucks or gathers on the shoulder, the extra shoulder length of the Blouse block may be incorporated in it, reducing shoulder to its usual length.

A simpler method consisting of width addition on the side seams only is often more convenient because it does not affect the length of the shoulder and involves no rearrangement of any shoulder fullness. This method is shown in style A in Plate 2, the blouse with the dart-tucks, a style which does not necessarily require a longer shoulder. The total bust width added is only 2–4 cm.

The Waistcoat in Plate 3 is an example of **a close fitting style,** well shaped at the waist. It illustrates the use of all the waist shaping indicated on the block, including the correct use of the Slanted CB and CF. It shows also a wrap *parallel to the Slanted CF.*

The Fancy Blouses in Plate 4 are examples of the **addition of fullness** which is no longer based on the requirements of the type of garment, e.g. the easy fit of a shirt blouse, but is distinctly **a feature of the style.**

The bigger number of tucks and slight fullness above the bust, suggest that these are *straight* tucks, not 'dart-tucks' (i.e. not a divided Shoulder dart *running off to nothing* above the bust). For these, extra width is added through the shoulder, after removing Shoulder dart into the underarm: for, unlike dart-tucks, they must be on the straight grain.

Styles B and C are simple variations with fullness *added* in the same way but *used* differently. This is a **simple method of designing** which consists in using a 'basic pattern' in a variety of ways, changing only some details of finish.

The Wrap-Over styles in Plate 5 are examples of standard **dress bodices** with a fitting allowance of 6–7 cm round the bust and 4 cm at the waist. They illustrate a basic method of planning a fancy wrap which is no longer just an opening. The variations are yet another example of simple designing.

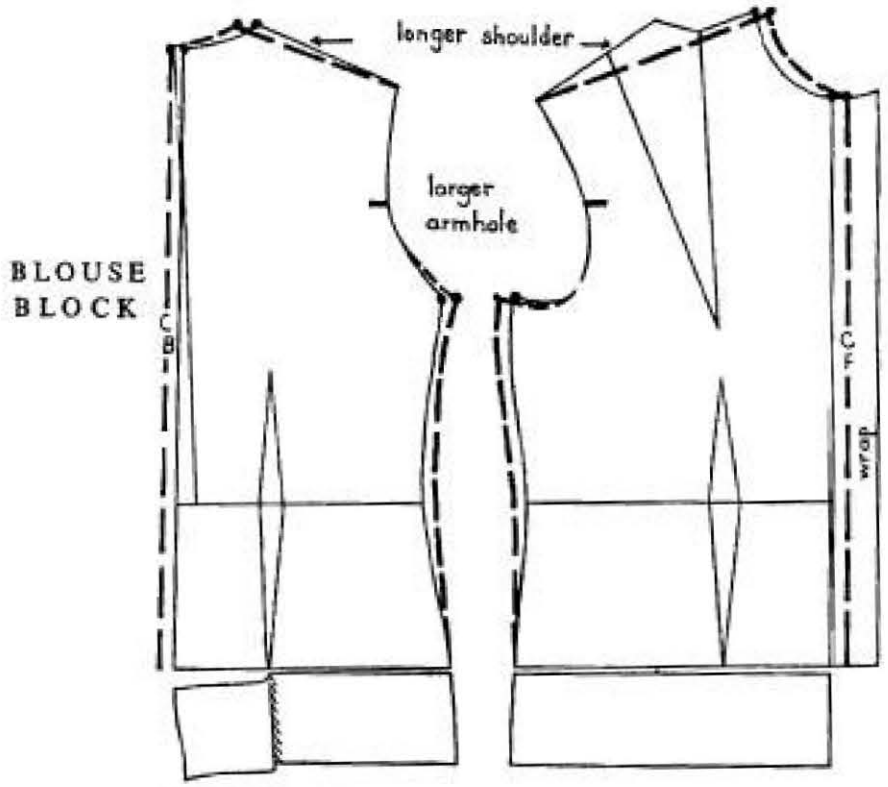


FIG. 1/IV

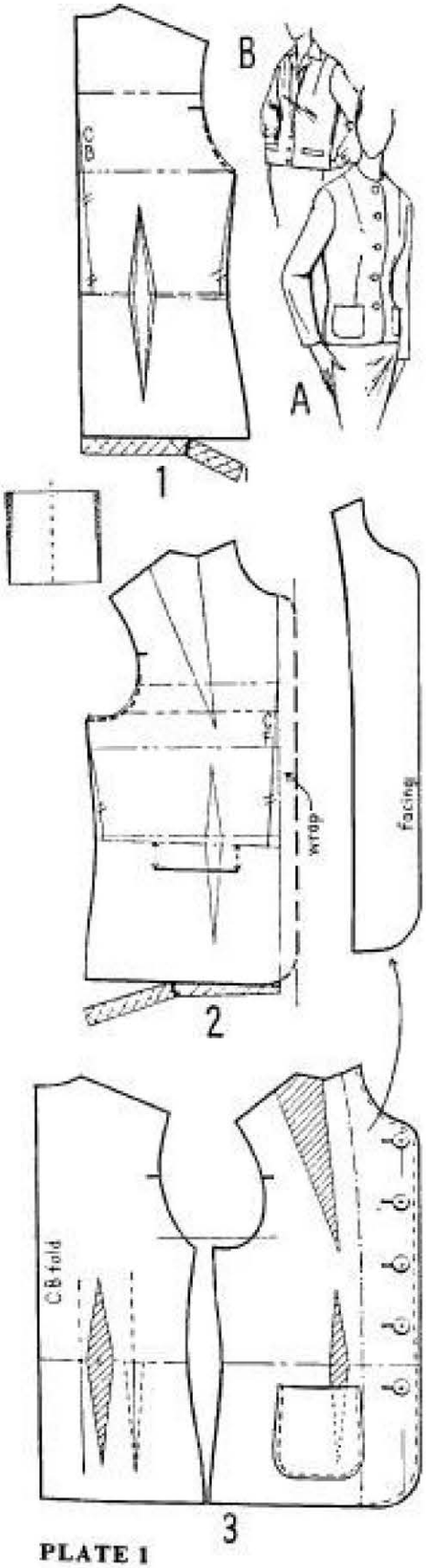


PLATE 1

PLATE 1—CARDIGAN

The Cardigan—style A—is fairly long, 20 cm below the waist, i.e. only a little shorter than the bodice block. It is *semi-fitting*, with approximately 10–12 cm ease round the waist. It has a 2·5 cm wrap, suitable for medium-sized buttons, and patch pockets of usual size (13–14 cm square). The bust dart is used on the shoulder, as on the block.

The Straight sleeve pattern is given in Chapter VII.

Make a full-length copy of the bodice block, leaving some paper beyond the CF Line for the wrap.

The Back is quite plain, *without a CB seam*, and follows the block very closely. Reduce the length by 2+ cm, and cut down the armhole 1 cm to enlarge it for a wider sleeve, suitable for an over-garment.

The *amount of the back waist shaping* can be retained as on the block, but it must be re-arranged, because the garment continues below the waist, and this makes the use of the Slanted CB, as well as of the *inner* side seam, inconvenient. The Sl. CB can be used in a hip-length garment only when there is a CB seam; the inner side seam is used below the waist only in very close fitting styles. Therefore, add the 2 cm of the Sl. CB to the Waist dart (increasing it), also the 1 cm of the side seam, if a more clinging back is preferred. Otherwise, ignore the inner side seam and let back waist be 2 cm looser (FIG. 1).

Instead of a single deep dart one can use two smaller ones, planning them each side of the big dart (FIG. 3), with at least 4 cm between them when finished. If preferred, and when fashionable, the latter may be stitched up to the waist only, producing a slight 'pouch' above.

The Front has a 2·5 cm wrap ruled parallel to CF. Curve the wrap at the top and lower end, following sketch and FIG. 2.

Adjust the front length to match the back, cutting off 2 cm at the side, but only 1 cm at the CF so that the *hem dips towards CF*. Increase armhole to match back.

Do not use the inner side seam or Sl. CF, i.e. leave the *front waist looser* (this adds 4 cm to it). Use the Waist dart as it is, *without adding to it*. Its lower end will be concealed in the patch pocket. This has rounded corners and is slightly narrower at the top. Mark its position parallel to *sloping* Waistline. Size = 13–14 cm.

Mark the 5 buttons, as described in Chapter III, sec. 12, the top one about 2–2·5 cm below the neckline, the lowest 4–5 cm below the waist. Divide the length between into four equal spaces, for the 5 buttons and buttonholes.

Outline **the facing** on the front, making it 9–10 cm wide in the lower part (to go well beyond buttonholes) and wider at the top, so that at least 4 cm follows the shoulder. Trace it through on to new paper and cut out.

The Sleeveless Jerkin—style B—is quite straight, loose fitting at the waist and shorter, i.e. only 15 cm below the waist. Omit all waist shaping and use *straight* seams, ruling them between UP and HP *before* reducing length. After lowering the armhole, fill it out a little in the front hollow (more suitable for *sleeveless* styles).

Add the wrap below the waist only, plan the buttons. The part above is a long V-neckline from NP to CF.

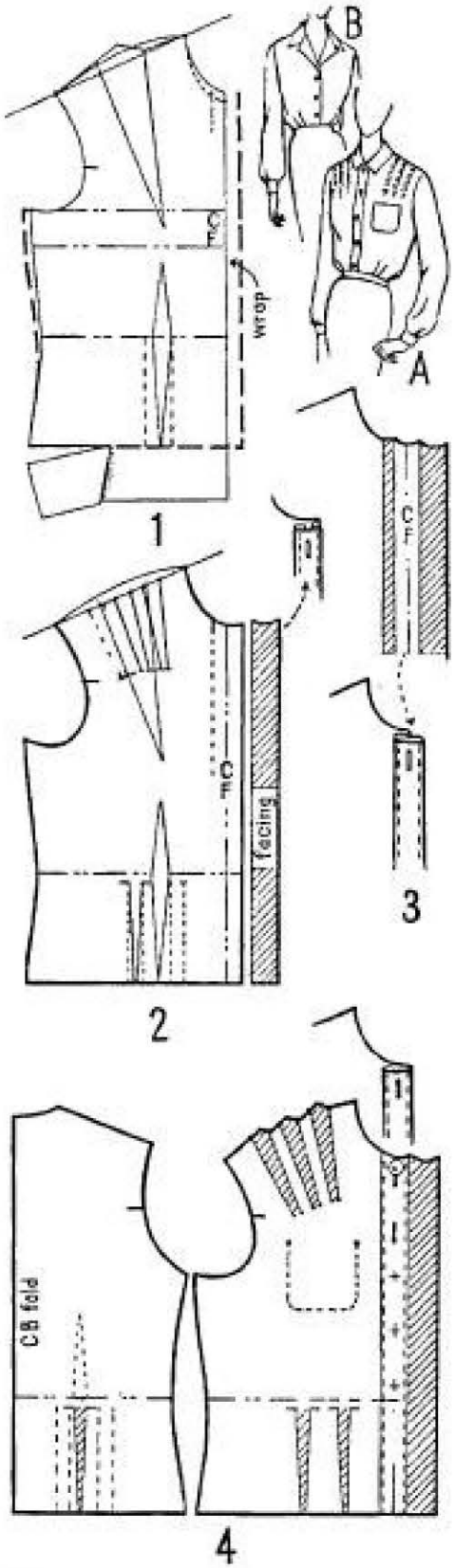


PLATE 2

PLATE 2—SHIRT BLOUSE

The Shirt Blouse—style A—has dart-tucks on the shoulder, a so-called 'Box Pleat' opening, a simple shirt collar and fairly loose, straight sleeves with cuffs (Bishop sleeves). Collar and sleeve are given in later chapters.

Make a copy of the block down to 15 cm below the waist: this is a good length for a 'tuck-in' blouse. Allow extra paper beyond CF for the wrap and facing (8–9 cm).

Extra ease round the bust (2–4 cm) is obtained by the simple method of adding width on the side seams. As this enlarges the armhole a wider sleeve is required, but for the style this is quite suitable.

The Front: add 0·5–1 cm on the side seam, running off to nothing below the waist (FIG. 1). Lower neckline 1 cm at CF (this may be omitted if *closer* neckline preferred).

Divide the Shoulder dart into 3 dart-tucks as described in Chapter III, sec. 6 (FIGS. 9 and 10).

Mark beyond the CF the width of **the wrap** which is equal to half of **the 'Box Pleat'**, as the other half is *inside* the CF Line (FIG. 1). Thus for a usual 4 cm width add 2 cm beyond CF; for a 3 cm 'Box Pleat' add only 1·5 cm.

Beyond the wrap mark **the facing** equal in width to the *whole* 'Box Pleat', i.e. twice the width of the wrap. This may be cut separately (FIG. 2) or in one with the wrap (FIGS. 3–4), according to method of finish and fabric.

The facing may be: (*a*) cut separately, joined and then 'tuck-stitched' on to the right side (FIG. 2); (*b*) cut in one with the wrap, folded over on to the right side (if material *reversible*) and tuck-stitched as above (FIG. 4); (*c*) cut in one with wrap, turned *under* on to the wrong side, and the raw edge enclosed in a tuck for which an extra 1+ cm must be added to the pattern (FIG. 3) either by slashing and inserting or by moving the CF 1+ cm out (see Chapter III, sec. 7, FIGS. 13 and 15).*

Plan position of small buttons and vertical buttonholes down CF Line: the top button 1 cm below the neckline, the last a little above the waist (small flat buttons, hooks or press studs may be used on tuck-in part).

To reduce the waist and **to** 'set' the pouch use the ordinary dart or smaller dart-tucks, stitched up to 2 cm below the waist, where fullness for pouch is released.

The Back is like the block except for the extra width on the side seam and the different waist finish.

The pattern could be widened by the standard method described earlier in the chapter (Blouse block—FIG. 1), producing either a longer shoulder or deeper tucks. Choice of method would depend on fashion and preference.

The Shirt Blouse—style B—with the plain shoulder should be widened by the *standard method* (unless a longer shoulder is not wanted). The Shoulder dart is transferred into the underarm, as shown in Plate 4.

For a 'convertible' or 'two-way' shirt neckline, i.e. worn open or buttoned up, the 'Box Pleat' opening is not used. A plain 2·5 cm wrap is added, as for the cardigan in Plate 1, and the buttons and buttonholes are planned lower, 11–12 cm down, with a small button under the collar.

* **N.B.** *The inner fold (tuck) in Fig. 3 is exaggerated in the sketch; it would not really come to the centre of the 'Box Pleat'.*

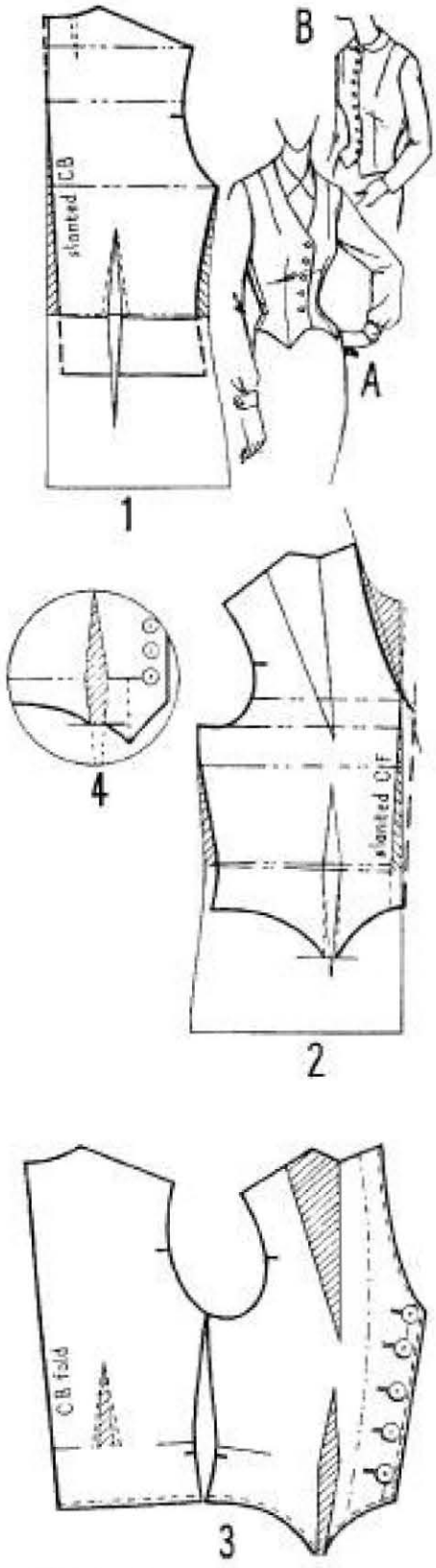


PLATE 3

PLATE 3—WAISTCOAT

The Waistcoat is shown with sleeves, worn as a blouse, or without sleeves, worn over a blouse. Two different necklines and shapes of basque are also given. The back can be cut to just below the waistline or longer and 'sprung out' to fit over the hips.

When copying the bodice block allow extra paper beyond the CF (at least 4 cm) for the upward extension of the Slanted CF, as well as for the wrap; and a little beyond the CB for the top extension of the Slanted CB.

Copy block to its full length or to 15 cm below waist for the easier marking-in of darts. Reduce length later.

As this is a close-fitting style, all the waist shaping indicated on the block must be used, and it may even be necessary to reduce (by deeper darts, etc.) the remaining 4 cm waist ease still left in the bodice block.

For the Back use Slanted CB Line, extending it upwards beyond the ordinary CB: the fullness thus added to the neckline can be reduced by a small dart or eased when making up. Below the waist, the Slanted CB, continued *straight* by the ruler, slants *inwards* so that width is lost over the hips precisely where the 'springing out' of a curved line is needed. However, as the basque is quite short, only 7–10 cm below the waist, this difficulty can be ignored and the necessary 'spring' (or ease) provided elsewhere, i.e. in the side seams, left open for the last 5–7 cm, and in the waist darts, left unstitched (just pressed in) below the waist, so that they can open out over the hips (see FIG. 3).

Use the *inner* shaped side seam, continuing it below the waist, as shown in FIG. 1. The dart above the waist may be made a little deeper than on the block.

For the Front use the Slanted CF Line which crosses the ordinary CF on the Chest level and so adds width to the neckline, an addition which in this style is *cut away*. Below the waist the CF Line slants inwards; but again this can be ignored because of the very short length and the cut-away shape of the basque.

Draw a 2·5 cm wrap, ruling it *parallel to Slanted CF*. Mark the depth of the V-neckline approx. one-third down CF, i.e. 11–12 cm down. A straight line ruled through this point to NP is the guide for shaping the final neckline which curves slightly from it to keep it more open. Continue it to edge of wrap and complete as in FIG. 2.

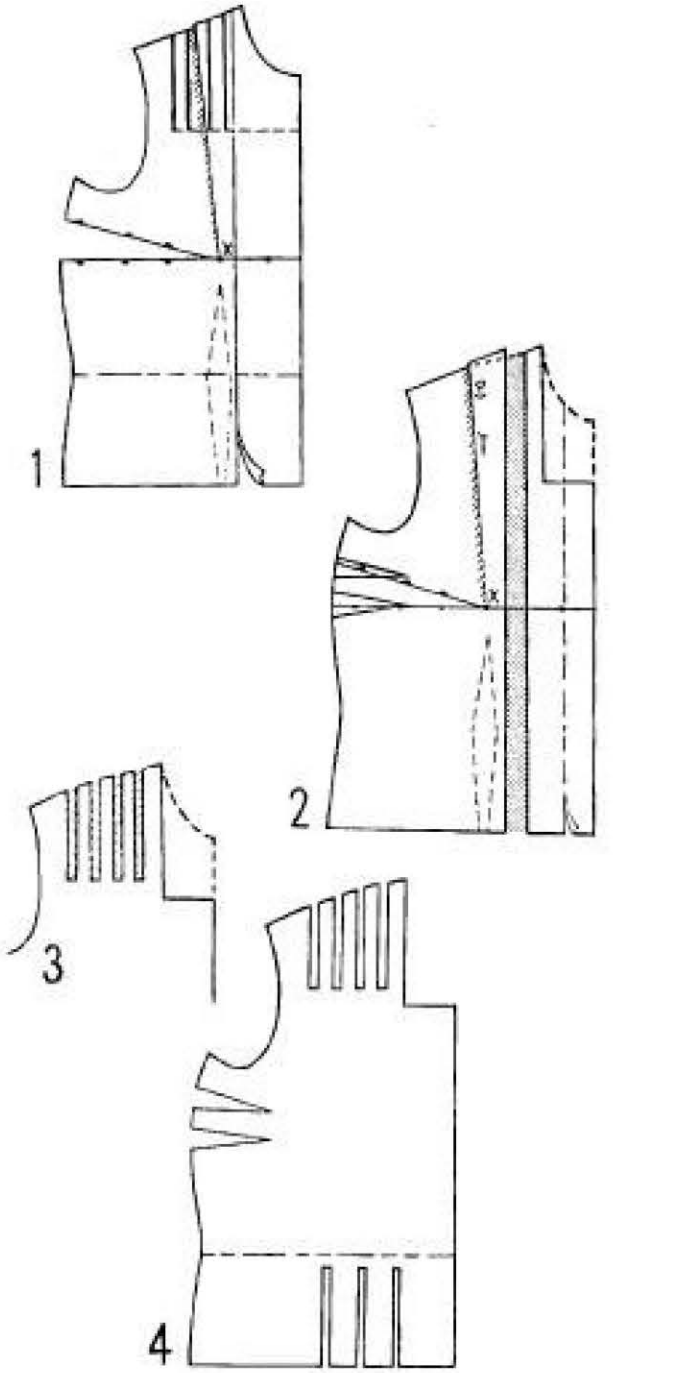
Use the *inner* side seam, curving it out below the waist to regain some of the width lost on the CF.

Use the Waist dart of the block. It may, however, be necessary to take it in a little below the waist (see widened end of dart in FIG. 2) to prevent it 'poking out'.

Plan a few guide points to draw the lower edge of the basque correctly. The waistcoat 'Points' are either in line with the Waist dart or a little inside it (in the second style, detail FIG. 4).

Plan buttons, buttonholes and facing as usual (FIG. 3).

For a tighter fit, a narrow belt caught in the side seams can be used to pull in the back waist more.



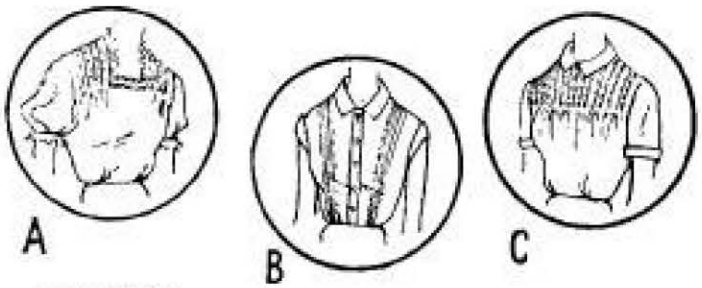


PLATE 4

PLATE 4—FANCY BLOUSES

The Fancy Blouse—style A—has 4 (5) straight tucks on the shoulder. Unlike 'dart-tucks', these must be the same width right through, and therefore cannot be planned conveniently from the *graduated* width of the Shoulder dart. In such cases it is usual to transfer the Shoulder dart into the underarm, and to add **extra width for the tucks**. This width, added right through, does not run off to nothing on the bust, but drapes over the bust, making the whole front looser.

In view of this addition, it is hardly necessary in this case to add any extra width on the side seams, as is done for blouse 'ease' in Plate 2. Nor is a larger armhole and looser sleeve essential for the style.

The Back is quite plain and follows the bodice block.

The Front: close Shoulder dart permanently (paste it) and transfer it to the side seam, where it is used in one or two Underarm darts (for method see Chapter III).

On the shoulder, now quite flat, plan (in faint pencil line) the *position* of the 4 (5) tucks, starting 2 cm from NP and allowing 2 cm spaces between the lines. The tucks are 10–12 cm long (ending on the same level) and parallel to CF, i.e. all *follow the straight grain*. With this spacing a 5th tuck would not be too close to armhole.

This preliminary planning can be done on a separate tracing of the flat (dartless) shoulder and later used as a guide for drawing the tucks on the final pattern.

Mark the line on which the extra width is to be added parallel to CF, from shoulder to hem, and cut pattern on it. Introduce the extra width as explained in Chapter III, sec. 7, FIGS. 13 and 14. Remember to fold out the addition as a 'pleat' before joining the second piece.

The width to be added depends on the size and number of the tucks. For fairly wide ones, i.e. 0·3 cm *on the double*, allow 0·6 cm for each tuck, i.e. 3 cm for the 5 tucks. For smaller ones take less.

On the *widened* front (FIG. 2) draw the actual tucks following the preliminary planning, but allowing beyond each line *the width for the tuck*, before measuring the spaces (FIG. 3). To obtain the final shoulder line, the tucks must be folded out as they will be when stitched, and a straight line ruled (and then cut) between NP and SP. Outline the square neckline, as shown in sketch (FIG. 2).

Style B follows the same method, but has more width added for bigger tucks, 1–1·5 cm wide *on the double* (4 × 2 = 8 cm or 4 × 3 = 12 cm). The tucks are in the centre of the shoulder and are stitched all the way down, so that they add no width (fullness) to the blouse. They are just a trimming.

Style C has small tucks (possibly pin-tucks) across the whole front, producing the effect of a yoke. The pattern must be cut in two places to add width for five tucks through the shoulder, and for three tucks through the neckline.

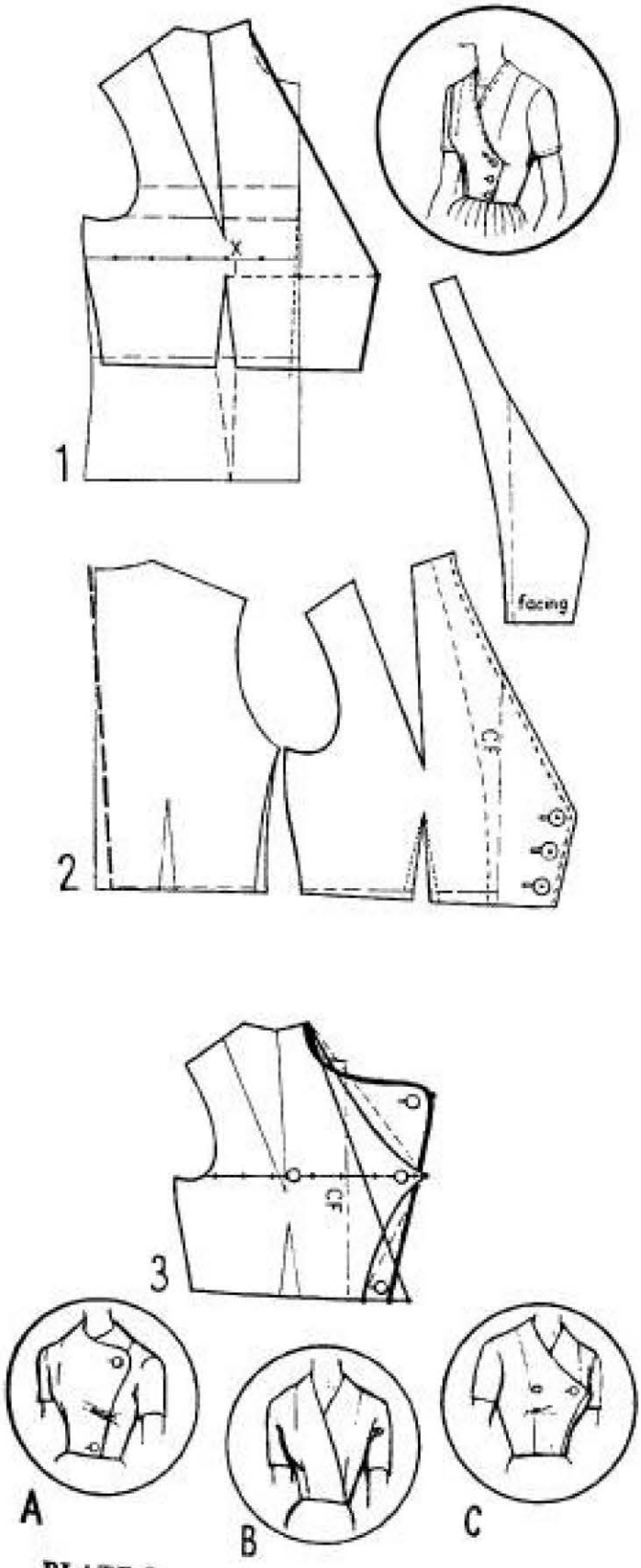


PLATE 5

PLATE 5—DRESS BODICES

The sketches show a variety of bodices having one feature in common: they are all 'Wrap-Over' styles, i.e. all have a fancy wrap projecting beyond the CF Line. The shape of the wrap is different in each case, but the method of cutting all the patterns is very much the same and can be explained on **the basic style**, the other three (A–B–C) being but **simple variants**.

The first problem to consider is how much paper to leave beyond the CF when outlining the block; the next—how to establish a few useful points (construction points) to help with the drawing of the wrap. Each sketch, therefore, must be carefully studied with this in mind.

For the rest, the styles are quite simple and illustrate the use of the bodice block for an ordinary *dress bodice* joined to a skirt at the waist, which is neat but not tight fitting (reduced to Waist measurement +4 cm). In the sketches the waist appears to be plain, i.e. without any pouch or visible fullness, but a little 'ease' in the front (which a sketch would not show) can be used, as it is quite suitable for the style and also becoming to most figures. The bodice block is outlined to the waist and the bust dart is used in its original position on the shoulder.
For the Back, which is quite plain, use the Slanted CB, the inner side seam and the usual Waist dart of the block.
For the Front use the *ordinary CF*, the inner side seam and the usual Waist dart. It is best to 'ease' the 1 cm of the unused slanted CF into the skirt (or add it to dart).

Before outlining the block, decide how far the widest part of wrap projects beyond CF and allow extra paper accordingly. In this style it must be 10–12 cm out because it covers the Waist dart, which, on the block, is less than 10 cm out (FIG. 1).

The following few guide points can then be marked: the depth of neckline, i.e. the point of 'crossing' on the CF, which here appears to be one-sixth down, i.e. 5–6 cm below the base of neck. Next, the *level* at which the wrap is widest must be established: this in the sketch, is just below the fullest part of the bust, say 2–3 cm below the True Bust Line on the pattern. Finally, the width to which the wrap narrows down at the waist is about three-quarters of the widest part of the wrap, about 7·5 cm (FIG. 1).

Draw shape of wrap through these points, place pattern on stand to judge the effect. Correct if necessary.

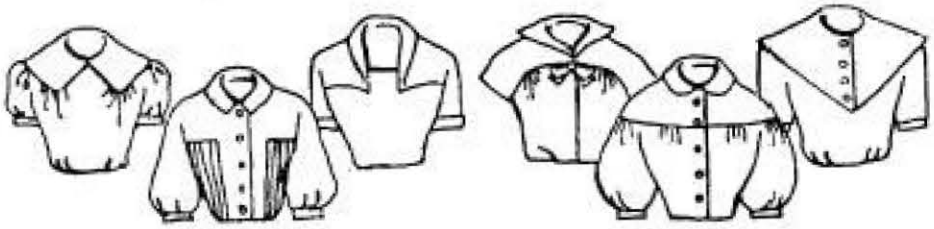
Style A: The wrap crosses over very high, 2 cm down CF (note curving of line). Its widest part is just below this level, about 2 cm lower. The wrap goes beyond the Shoulder dart, i.e. 12 cm out, and reduces itself to less than half of this at the waist, say 5 cm (FIG. 3).

Style B: This is a simple 'Cross-Over', usually projecting at least 10–12 cm beyond CF (but may be more).

Style C: The wrap is widest above True Bust Line level, i.e. on the Bust Line. This tends to give a high neckline at the crossing, unless lowered by curving the line well (see FIG. 3).

CHAPTER FIVE

YOKE STYLES



This is an important group of styles to which belong many classical shirt blouses, shirtwaist dresses, various sports garments and ordinary blouses and dresses.

The construction of yoke styles is more complicated than that of the patterns considered so far because it involves some 'cutting up'—an important element in designing. The front and the back (but sometimes only one of them) are divided or 'cut up' into two sections: a 'Yoke' and a lower part. This increases considerably the possibilities of design variation, as each section can contribute in many different ways to changes in style, line and fit.

The yoke can be straight or 'square', slanted up or down, round, curved upwards, pointed and so on. It may vary in size from a narrow strap or epaulette, high on the shoulder, through a variety of widths, to quite a deep yoke coming half-way down the bodice or even lower. It may cover only part of the top or go right across and even extend beyond the shoulders. It may be joined to front panels of different widths and shapes and may follow many other fancy lines. The number of variations possible in yoke styles is almost unlimited.

The lower part, under the yoke, can be easy fitting, close fitting or full, and can have gathers, tucks, smocking, gauging and different kinds of pleats, folds and even draped effects. It can also be stitched, often in fancy seam, *over* a yoke, forming pockets, flaps and other decorative extensions.

In spite of this variety in shape and fit, there is a **general method for cutting all yoke styles**. The group of yoke styles is thus a good illustration of an important method of approach to pattern designing which consists in grouping designs according to their basic construction.

In addition to all this, if one considers the variety in fabrics and trimmings, and the many possible combinations of textures, colour and patterns (e.g. bias and straight in checks or stripes) it becomes evident that the simple yoke style can produce a very big range of designs.

The Basic Method: Before planning and drawing the shape of a yoke, the Shoulder dart must be eliminated to obtain a plain, **dartless shoulder section.** The Shoulder dart is closed and pinned. The pattern will no longer lie flat but, if the yoke style is simple, it is generally possible to outline it on the pattern in this position, as explained in Chapter III, sec. 3, FIGS. 1, 2, 3. If this is inconvenient, then a temporary slash in the underarm is used to make the pattern lie flat on the table while the shape of the yoke is drawn. For explanation of the 'temporary slash' see Chapter III, sec. 4, FIG. 5.

This first step becomes unnecessary when the bodice block already has a plain shoulder section, with the dart fullness transferred to some other position. Therefore, if many yoke styles have to be cut (e.g. in the blouse trade or when yokes are generally fashionable) it is useful to have a special foundation pattern with an Underarm dart instead of a Shoulder dart.

N.B. It must be borne in mind that because of the difficulty of showing *on the flat* a pattern with the dart closed, it is often necessary to show a 'temporary slash' *in a diagram*, when in practice this can quite well be avoided by suitably holding and handling the pattern.

After closing the Shoulder dart *any shape of yoke can be drawn over it*, ignoring the dart completely, and using such construction lines and points as seem to be suitable for the style. The simplest yoke style is one with a straight yoke (or 'square' yoke), and this can be used to explain the general method.

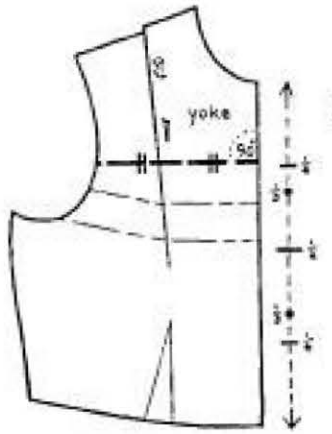


FIG. 1/v

The depth of a yoke is usually established by reference to the CF line and not to the armhole, and it is marked **as a proportion of the CF length**, which on an average is 35–38 cm from base of neck to waist. It is generally quite easy to see from a sketch whether a yoke comes $\frac{1}{3}$, $\frac{1}{4}$, $\frac{1}{5}$, etc., down the CF. After marking the correct depth on the CF of the pattern, a horizontal line is drawn from this point at right angles to the CF: this is the lower edge of the straight yoke. Instead of drawing the line with the help of a set square, the CF line can be folded over through this point to obtain a *crease at right angles* to it for the lower edge of the yoke (see Chapter III, sec. 3, FIG. 3).

Draw **'balance marks'** across the 'yoke line' *to fix the position of the fullness* under the yoke. The fullness is arranged more or less equally each side of the closed dart, so that it comes just above the bust. This places the balance marks 4 cm (min.) from the armhole and 4–5 cm from the CF, according to the amount of fullness and whether it is to be spread out or concentrated.

Cut away the yoke and paste down the bit of the dart which remains in it: it will *not be used as a dart* any more. Or else lay the yoke with the pinned dart on to another sheet of paper and outline and re-cut it, taking care to trace the balance marks through (FIG. 2).

In the lower part, now separated from the yoke, the dart is more often than not opened out again to provide any fullness appearing under the yoke. The balance marks ensure that when the two sections are joined the fullness will come in the right place. The top edge of the lower part must be corrected to a smooth curve, and sometimes it is raised slightly at the armhole to counteract any possible tightness there (FIG. 2).

A back yoke is cut in the same way, but without the complication of dealing with the Shoulder dart.

A front and back yoke joined at the shoulder and cut out *without a shoulder seam* is known as a *'Saddle Yoke'* (Plate 8).

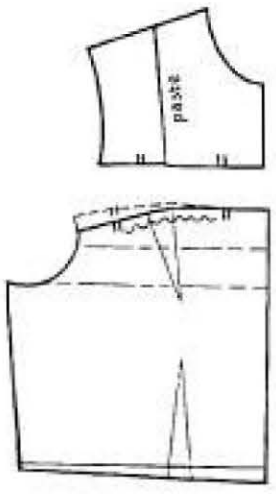


FIG. 2/v

If the design of the style shows that the lower part has *extra fullness* arranged in gathers or folds, then the dart fullness is just added to it. On the other hand, if the lower part is quite plain, *without fullness*, as, for instance, it must be when stitched *over* a yoke, then the unwanted fullness is transferred into an underarm dart. This can, of course, be done at the very beginning, when closing the Shoulder dart.

From this simple outline it will be seen that the basic method can be applied to different yoke styles. Some **construction lines** and **construction points**, however, will be necessary for the correct planning of the more fancy yokes, and these **'guide' lines and points** can be found only by experience, i.e. by working through a variety of different styles. In this connection a few general hints can be given at this stage, and the examples in Plates 6 to 9 will provide the illustrations.

The depth of a fancy yoke—curved, pointed, sloping or any other shape—can always be established correctly *by reference to the CF line*. Even when the lowest level of the fancy yoke (e.g. a 'point') does not actually touch the CF or come anywhere near it, the point can always be *imagined* inside a simple straight yoke, which passes through it, and connects it with the CF. In general, such *imaginary horizontal construction lines*, planned at various levels suggested by the style, e.g. through a 'point' (in a pointed yoke), through the top or bottom of a curve, through a 'panel' breaking up the continuity of a yoke, etc., are all very useful aids in interpreting and planning yoke styles. They can be imagined while studying the sketch, and later actually used as construction lines on the pattern.

The yoke is a plain section which *covers part of the Shoulder dart*. It must be noted that, according to the shape and depth of the yoke, more or less of the dart fullness will remain for use in the lower part, i.e. *under* the yoke. The yoke may even be of such a shape (e.g. a yoke with a 'point' reaching down to Bust Line level) that it will cover up the Shoulder dart completely. That the bust shaping dart is not 'lost' in such a case, but merely *concealed*, can be proved by the fact that when the two sections are joined the front will not lie flat: the contour shape will have been retained just as if a visible dart had been used (see Chapter VI—Concealed Dart).

In many cases the fullness provided by the Dart under the yoke is not sufficient for the style, and there are various ways of increasing it. Illustrations of this are given by the examples in Plates 6–9.

The cutting of a back yoke is usually simpler. The darts involved can in most cases be ignored, or rather left in their original position, to be used as in an ordinary plain back (i.e. mainly eased). Any definite fullness shown under a back yoke is always *extra* fullness, added specially for the effect required by the design (see Plate 9).

PLATE 6—STYLES WITH FULLNESS UNDER THE YOKE

The two styles—A and B—illustrate two **methods of increasing fullness under the yoke**, each resulting in a different fit at the waist.

Style A has a deep round yoke. Because of the depth of the yoke, the fullness provided by the remainder of the Shoulder dart (just over 2·5 cm) is not quite sufficient for the gathers shown in the sketch, and at least as much again must be added. The easy pouched fit at the waist is produced (in a blouse) by dart-tucks releasing their fullness just below the waistline: for this the ordinary Waist darts of the block can be used. *The back* has the same style of yoke, with or without fullness underneath, and it *must have an opening*, since the front does not show one.

Outline the bodice block as usual and cut it out, leaving some paper beyond the armhole for the yoke extension (unnecessary for a version without an extension). Close and pin the Shoulder dart.

Plan the yoke marking its depth one-third down CF or simply starting it from the Chest Line level (12 cm down CF). Draw a construction line of the same length (12 cm) from a point half-way along neckline down towards the closed Shoulder dart, and through this point draw a curved yoke either to SP or 2–3 cm beyond, to form a small shoulder extension fitting over the sleeve. Draw balance marks 4 cm from CF and 5 cm beyond the closed Shoulder dart.

Cut away yoke and paste the dart in it. In the lower part open the remainder of the dart and measure it to find the exact amount of fullness available. Then mark a line from top to bottom, just outside the dart, and *cut on it to within 0·3 cm of the waist*. Place pattern on another sheet of paper, open the slash to provide an addition to the dart, so that the two together measure 6–8 cm. Correct the top edge to an even curve, adding and losing more or less equally on the two edges of the slash, and cutting away the point (FIG. 2). Outline the rest and cut out.

Style B shows another type of curved yoke. The *closer fit at the waist* suggests a different method for increasing the fullness under the yoke.

Prepare a pattern with a 2 cm wrap (for small buttons). Close the Shoulder dart as usual.

To plan the yoke (FIG. 1) use two horizontal construction lines: the lower on the Chest Line or a little above it; the higher 4 cm above that for a fairly flat curve, and up to 5 cm for a more pronounced one. Draw the curve. Note that it meets the curve of the other side on CF (not on the edge).

After cutting away the yoke, open the dart in the lower part, slash along the inner line down to point X (on True Bust Line) and then close the Waist dart to the same point. A gap will appear, adding fullness to that provided by the end of the Shoulder dart.

Plan 4 small buttons in the yoke. Then, keeping to the same spacing, fit in as many as will go into the lower part of CF (FIGS. 2 and 3). Complete as usual.

N.B. If used for blouses, these patterns must have an extension (13–15 cm) added below the waist.

PLATE 7—YOKE STYLES WITH EXTRA FULLNESS

Styles A and B show more fullness than the previous yoke styles: it drapes over the bust, going right down into the waist. In style A it is *more spread out*; in style B—*more concentrated* in folds or pleats. Both yokes are quite high, which is more usual for yoke styles with so much fullness.

Style A: Prepare a blouse pattern with a 2·5 cm wrap, close Shoulder dart and plan the yoke from a point 4 cm down CF. The balance marks are 2·5 cm from each end, approximately 12 cm apart for the spread-out gathers.

After cutting away the yoke, open dart in the lower part. Cut pattern from top to bottom, 7 cm inside CF; lay one piece on to new paper, pin and then measure *from the cut edge* 12–15 cm for extra fullness. For correct matching of other piece, proceed as explained in Chapter III, sec. 7, either making use of True Bust Line for balancing the pieces (FIG. 13/III) or folding out fullness as a pleat (FIG. 14/III).

Style B: Plan the yoke with the help of a horizontal construction line (5 cm down CF). From this level, at the armhole draw a yoke up to NP, curving it 3 cm from a straight construction line. The balance marks are 5 cm from each end, only about 7–8 cm apart.

After cutting away the yoke, open dart in lower part and, pasting some paper underneath, re-shape the top edge of pattern to an even curve, passing 1+ cm or more *below* and as much *above* the dart edges. Cut along the new top edge, trimming away the point (see end of Chapter VI; FIGS. 2 and 3).

Cut pattern on a line which passes through the dart point and is parallel to CF. For the addition of fullness proceed as before. Since the open dart provides some of it, enough for one of the folds, it is sufficient to add 12 cm for the other three folds shown in the sketch, 4 cm for each 2 cm soft (not flat and set) fold.

The fullness could likewise be estimated on the basis of the space between the balance marks, doubling or trebling it. For very set folds or pleats it is better first to transfer the Shoulder dart into the underarm and then to allow the full 15–20 cm right through, to gain more fullness on the bust level, where the *folds tend to open out*.

Adjust the top edge to a good line, gaining and losing as usual. The line is now straight and, only when gathered will it assume its original shape and fit the curve of the yoke. In the case of set folds or pleats the addition of extra height by upward curving of the top edge is advisable (broken line, FIG. 3); the edge will assume its final shape when the fullness is actually folded or pleated according to sketch.

Style C has no fullness. The lower part is stitched *over* the yoke, forming pockets. It has a 'dicky' with collar. The Shoulder dart is transferred to the underarm where it is used in one or two darts. Plan the yoke from a construction line 8 cm down CF and mark the 'point' of the V-neckline (V) 12–13 cm above the waist. After separating the parts, re-cut them with all the necessary additions, e.g. pocket pieces, full depth of tuck-in for the dicky and so on. Complete as usual.

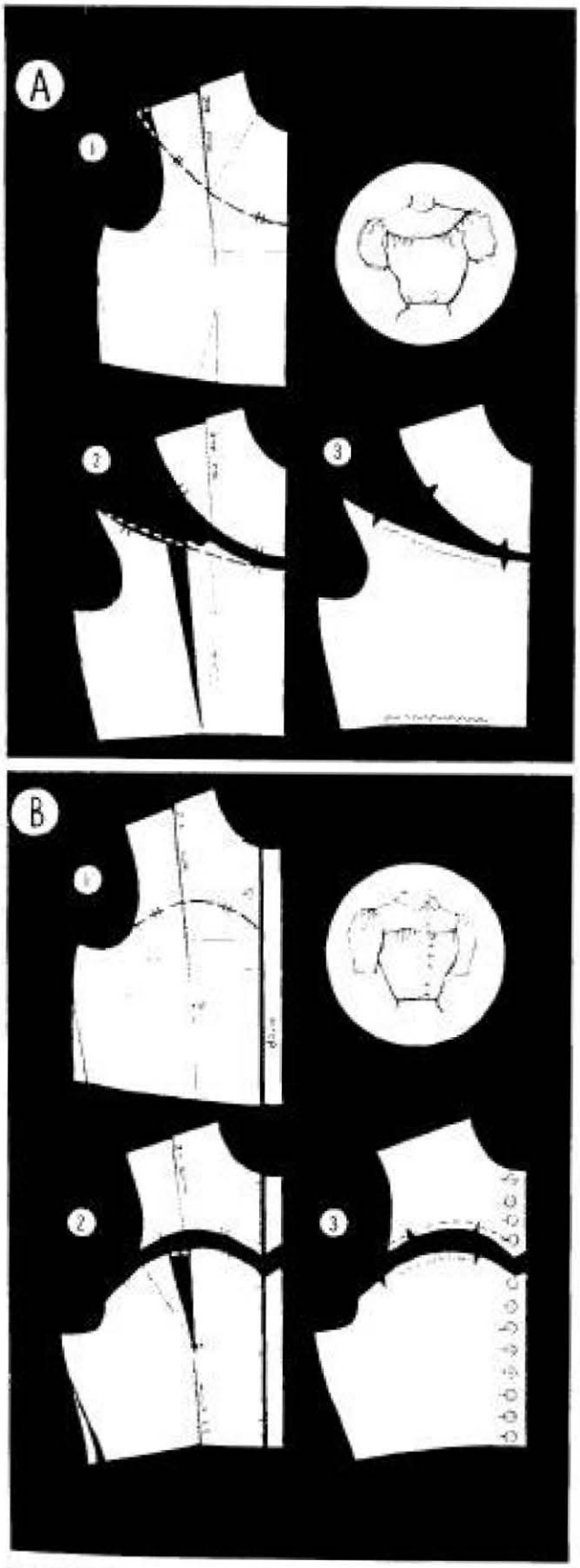


PLATE 6

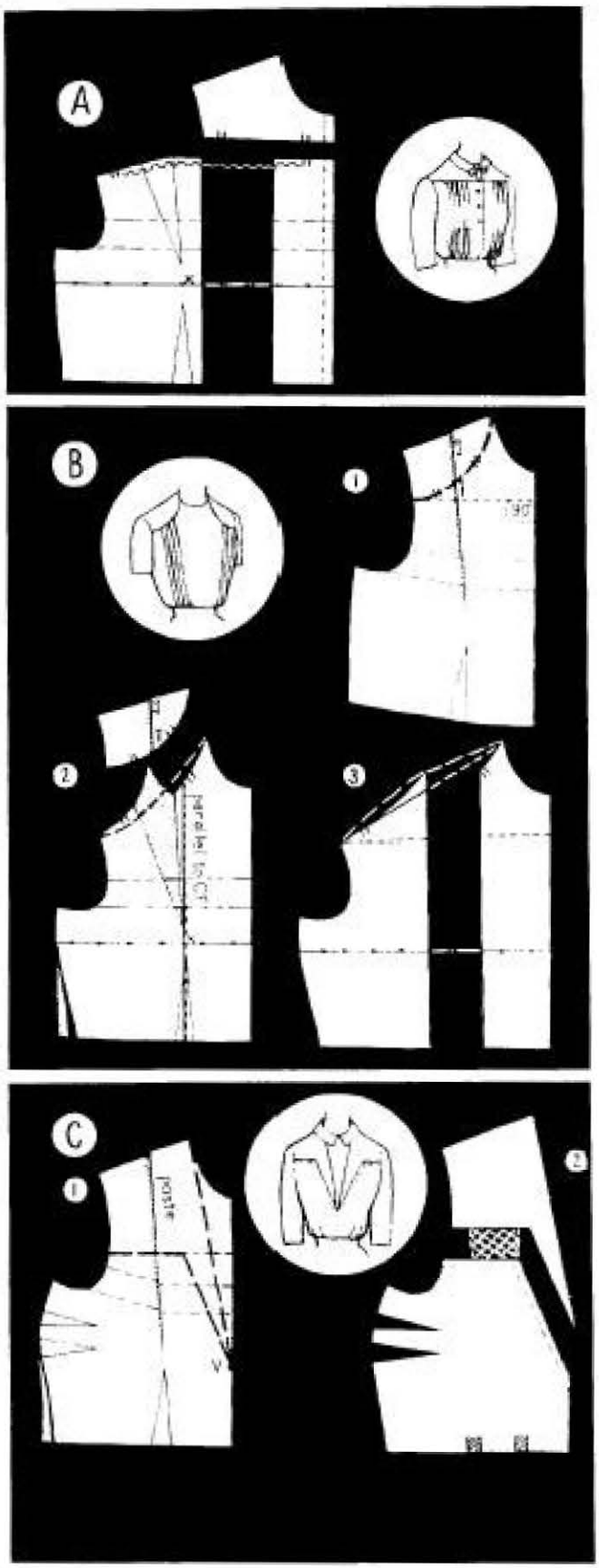


PLATE 7

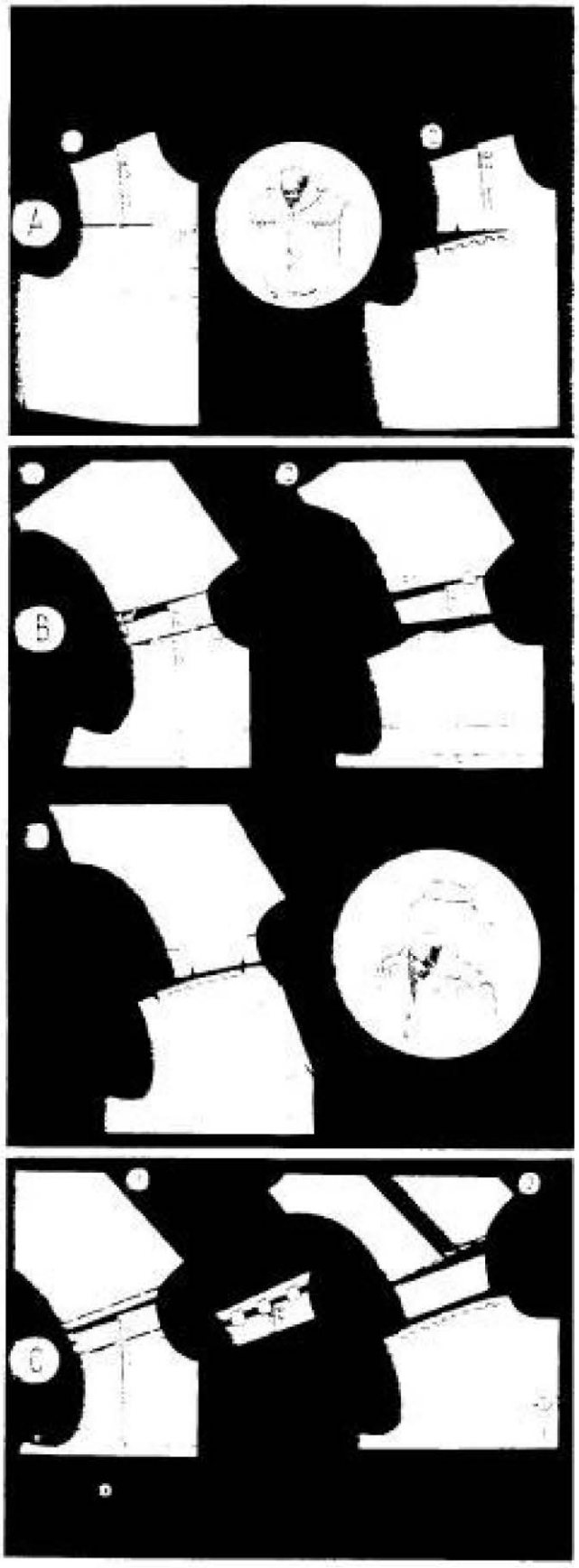


PLATE 8

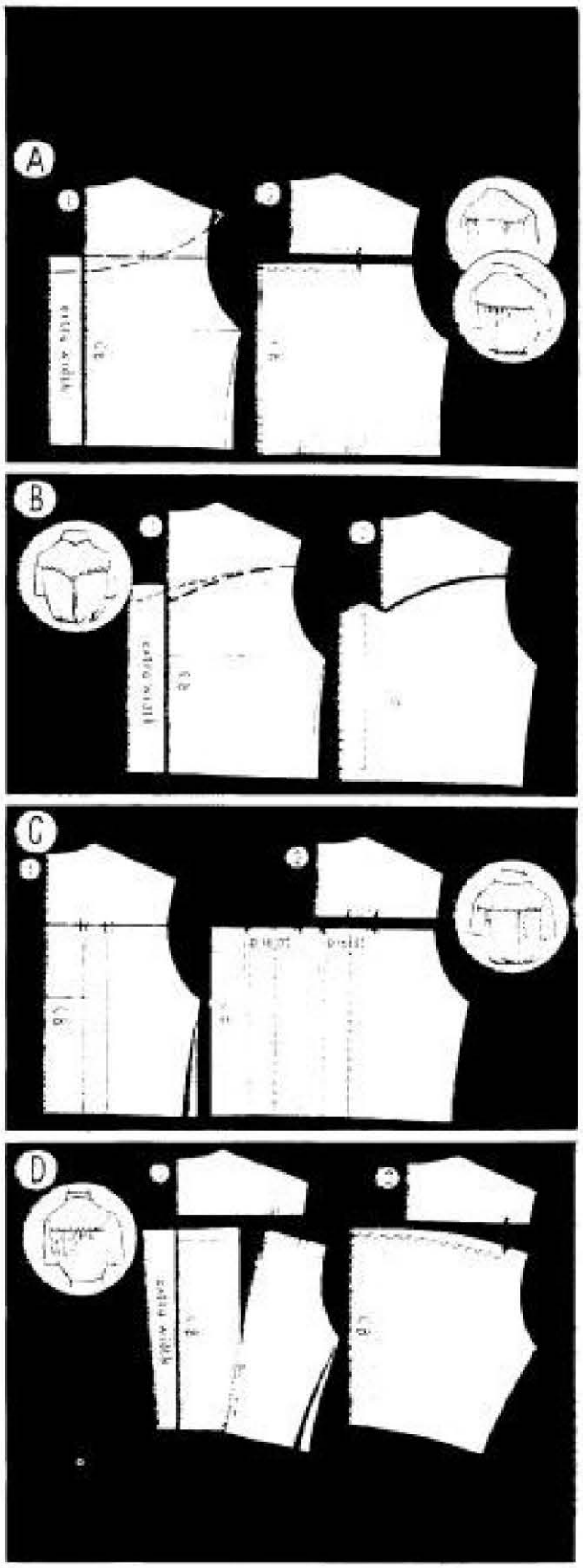


PLATE 9

PLATE 8—CLASSICAL YOKE STYLES

The three classical yoke styles in Plate 8, known as Imitation yoke (A), Saddle yoke (B) and Shoulder Strap or Epaulette (C), are often used in shirt blouses or dresses and in other similar styles.

Style A is a simple blouse with a slash from the armhole towards CF, producing the effect of a yoke line (**Imitation yoke**). Whatever the shape of such a slash—straight, curved, sloping —*it must always cross the pinned Shoulder dart*, the lower end of which will be gathered into it. Close Shoulder dart and plan position of the slash which must always be above Chest Line level. In this case it runs on a level marked 5–6 cm down CF. Make the slash 10–12 cm long, crossing the dart by at least 2 cm. Cut it to within 1 cm of its end to allow for a 'dart-point' finish.

Paste the dart in the yoke part and open it in the lower part. Correct this edge (i.e. lower edge of gap) to a smooth, almost straight line, raising it 0·5 cm near the armhole, as explained for the basic yoke (FIG. 2).

If the style shows more fullness, cut through the dart down to the waist, and add extra width as shown in Plates 6 or 7.

Style B is a shirt blouse with a type of **Saddle yoke** which is a popular variant of the basic one. It consists of an incomplete front yoke, reduced to shoulder strap width, which is cut *in one with the back* of the blouse, or with a back yoke (as in a man's shirt). There is *no seam on the shoulder*.

Prepare a blouse pattern with a 2·5 cm wrap; close the dart and plan the line of the front yoke. This may be parallel to shoulder line, but 4–5 cm to the front of it; or it may run from 6 cm below NP to 4 cm below SP, so that the yoke is a little wider at the neck end (as style B); or, it may be almost at right angles to CF (giving a still wider yoke part at the neck).

Cut the yoke from the front and then place it next to the back, outlined on a sheet of paper (but not cut out), with shoulders touching at NP, but 1 cm apart at SP. Shorten the back shoulder to match the front or lengthen the front shoulder to match the back: this gives a longer shoulder which is quite suitable for a shirt. Outline the yoke part in one with the back, thus eliminating the shoulder seam altogether (FIG. 3). Complete as usual.

Style C is a shirt blouse with a **Shoulder Strap** and no shoulder seam. There is some fullness under the strap usually both in the front (i.e. the Dart), and in the back, where it is specially added for ease and style.

After closing the Shoulder dart, join back and front at the shoulder with gummed strips across the seam. Plan the shoulder strap, measuring it wider towards the front than towards the back, i.e. 3 cm front and 2 cm back for a 5 cm strap. The shape may vary a little and be quite straight or slightly wider at the neck end.

After cutting away the strap, open the dart in the front for gathers and then, through the shoulder, add width to the whole back (1–3 cm) to provide for extra back width and gathers under the strap.

PLATE 9—BACK YOKES

In this Plate are shown several styles of backs with yokes. All have fullness under the yoke arranged either in pleats or gathers. This, it must be noted, is an effect typical of back yokes, which often show more fullness than their counterpart in the front, and can even go with fronts that are quite flat (without any fullness).

In each case the fullness is obtained by a special addition to the width of the lower part, and only in one case, in style D, is the Waist dart added to it.

Style A has a straight (or square) yoke which is usually placed along the Back Line or even a little above it. A back yoke is often higher than a front yoke, as this is thought to be more becoming. Deep back yokes, however, are often in fashion and sometimes more suitable (e.g. when the amount of fullness under the yoke is considerable). If yokes *must match*, then their common level is found by measuring both back and front yoke lines *from the waist upwards*.

Add the extra width beyond the CB Line by pasting a strip 5–8 cm wide. Or allow this extra width when outlining the block by placing CB 5–8 cm from the edge of the paper, and then cutting away the unwanted width at the top, beyond the yoke. The single balance mark is placed a little nearer to the armhole than to CB in order to spread the gathers over more than half the yoke length (sketch 2). For 'grouping' gathers (sketch 1) two balance marks must be used.

A round yoke is also indicated in FIG. 1 (broken line).

Style B has a pointed yoke with a CB inverted pleat. The sloping, slightly curved yoke line is drawn from 3 cm above the Back Line down to 3 cm below the Back Line at CB. Cut away the yoke.

Add to the lower part, beyond CB, a 6–8 cm extension for a 3–4 cm knife pleat. Two such pleats facing and meeting on CB will make an inverted pleat. Fold the extension lengthwise through the middle and then fold this under the edge, *as a pleat*: cut off the piece projecting above the top edge. When opened out, the pattern will appear as in FIG. 2.

If this width is to be used in gathers (not pleats) the top edge follows the higher, broken line (FIG. 1).

Style C, with a straight yoke, has four knife pleats turned outwards from a 10 cm wide 'Panel' in the centre. After cutting away the straight yoke, plan the position of the pleats in the lower part, the first 5 cm from CB, the second—4 cm beyond that. Cut on the lines and place the cut pieces on a new sheet of paper, allowing 8 cm between them for the two sections of each 4 cm pleat.

Style D has more fullness under the yoke than style A, but little or no fullness at the waist.

After cutting away the yoke, close the Waist dart and slash above it to obtain some of the fullness under the yoke. Then extend the lower part beyond the CB *unequally*, adding 5–6 cm at the top, and only 2–3 cm at the waist. For closer waist fit, use inner side seams.

SOME PROBLEMS IN YOKE STYLE DESIGNING

Yoke styles, though simple in construction, and on the whole easy to cut, nevertheless present some problems of design which may considerably affect the final result, as some of the examples have already shown.

Some of these problems are connected with questions of good **styling for individual figures**; others are concerned with details of suitable finish, i.e. with **technique**. A few of these will be mentioned as examples of what a designer and pattern cutter has to consider when planning a yoke style.

When planning a straight yoke style, for example, it is important to remember that, from the point of view of becomingness, it matters very much on which level the yoke line is placed, for **not every depth of yoke is suitable** or equally becoming for every *type of figure*. It is a recognized fact that a straight yoke line placed rather low, just above the highest point of the bust, *cuts the figure* in the wrong place and is a hard line, especially in a close-fitting bodice. Any fullness released from under such a yoke makes it even worse, and on figures with a prominent bust the effect may be particularly inelegant and unflattering. Such a deep yoke is acceptable only when it is cleverly *balanced by other details* of the design, e.g. by an easy fit of the bodice, no fullness under the yoke, or when it simply happens to be fashionable.

In the case of most figures of average shape, if a **straight yoke** comes above fullness in the lower part, it should not be deeper than a quarter way down the CF. For many figures a higher line is better and, generally speaking, a high yoke, which releases fullness well above the highest point of the bust, gives a more pleasing effect and is safer from a fitting point of view (the reverse applies to back yokes—see Plate 9). All this does not mean, however, that a pattern cutter is entitled to alter completely the interpretation of a yoke style. It merely points to a problem, which has to be solved according to circumstances, possibly by re-designing the style a little.

In the case of a **round yoke**, the lowest point of the curve can be on a deeper level (usually about one-third down the CF or even more), because from here the line sweeps *up* towards the shoulders, finishing quite high, near the SP and with fullness—if any—released well above the bust.

A trimming under a yoke, such as a frill, a deep horizontal tuck or a row of short, vertical tucks, can produce the effect of a deeper yoke than actually planned. Such decorative details must, therefore, be considered as an integral part of the whole design (not just as something applied at a later stage), and they must be planned in conjunction with the depth of the yoke.

Similarly, **the pattern of the fabric**, for instance checks or stripes, may have to be considered at an early stage. Stripes running across a yoke have a *widening effect* at the top, and lengthwise stripes in the lower part a *slimming* one; and this is particularly suitable for the heavier-built figure. However, care must be taken when planning a yoke style involving the opposite or any unusual planning of stripes.

In connection with **problems of technique**, it is sufficient to mention at this stage that *short openings* in yoke styles are often made easier or more difficult by the shape of the yoke. For example, a straight front yoke is not usually deep enough to include the whole opening, which must, therefore, be continued below the yoke into the lower part or else not used at all in the front (i.e. used in the back instead). On the other hand, a round yoke, coming down to chest level, may be quite deep enough to include the whole opening (13–15 cm minimum). When there is an opening all the way down there arises another problem in the suitable *planning of the buttonholes*, which should not interfere with the line of the yoke.

These are but a few instances of the technical details which often have to be considered at quite an early stage in the planning of yoke styles.

CHAPTER SIX | DART MANIPULATION

The important part played by darts in fitting a garment to the contour shape of the figure has already been referred to in earlier chapters. It will now be discussed in greater detail, giving the reasons why correct dart shaping is so vital to good cut and fit, and explaining the different methods of manipulating darts, mainly by transferring them from one position to another.

When modelling on the stand, it soon becomes evident that a pattern piece cannot be moulded to a prominent or hollow part of the figure without producing some surplus fullness either on the edges or in the middle. From this fact there follows a most important principle on which good cut and fit are largely based, viz. that since the shaping of *flat* fabric to the *curves* of the figure invariably produces some **surplus fullness**, it is essential always to be aware of this fact and, in order to achieve a perfect fit, to deal with the unwanted fullness in a definite and correct way.

Darts are used to dispose of this fullness and in general *to control it*. If it is not controlled, it may lead to *serious difficulties at the fitting stage* and be the cause of such defects as tightness over the bust, ill-shaped waists, loose and baggy armholes (and therefore badly fitting sleeves), gaping necklines and creases in various parts of the bodice.

Bodice block darts not only record the fact that this surplus fullness exists, but also provide a means of dealing with it. **The Bust dart, the Waist darts** and, to a lesser degree, **the Shoulder blade dart** between them give the bodice block its *depth*, i.e. its third dimension. This is of considerable help when cutting patterns on the flat (i.e. not on the stand), for the darts introduce into flat cutting one of the biggest advantages of modelling, the constant *awareness of the shape of the figure*, with all its curves and hollows.

When close fitting styles are fashionable darts are obviously much more in evidence, as they are the principal **means of moulding the fabric to the figure**. But even in loose, straight-hanging styles they play their part by **controlling the hang of the material** (this is a fact which is observed particularly clearly in skirt cutting). Darts, therefore, represent something which underlies all good cutting, whatever the garment, the style or the fashion of the moment.

In practice, the use of an obvious dart is not the only way of controlling the shape and the hang of a garment: there are many other ways in which this can be done. Darts can be replaced by seams *containing the darts* (e.g. Panel seams), or by gathers, as in many yoke styles, or by dart-tucks, folds, draperies and so on. Within the limits of a particular style any of these can take over the function of a simple dart with *the same effect in fit*. Therefore, it is not always a question of eliminating the unwanted fullness as inconspicuously as possible, but often of making use of it as an integral part of the design. A list of the many different ways in which this can be done is given below.

With the first steps in pattern designing it becomes evident that not only can the original **Shoulder dart of the bodice block** be used in many different ways, some of which have already been mentioned in earlier chapters, but that it can also be **'moved' from one position to another**. This introduces new possibilities of achieving variety in line and fit, and expands considerably the range of styles. In fact, advanced designing is very much concerned with new and interesting ways of using the surplus fullness or 'dart fullness'.

The front dart fullness can appear **in six basic positions**:

1. On the Shoulder
2. In the Underarm (occasionally armhole)
3. In the Waist (or the hem)
4. In the Neckline
5. On the CF Line
6. Concealed in seams

The back of a bodice has its **dart fullness problem** also, since the back, particularly in a modern figure, is by no means flat, as was explained in Chapter II (sec. 11). The back of a bodice must be fitted to the curve of the spine, to the shoulder blade and also to the hollow of the waist. The latter requires fairly deep waist shaping; but the 'dart fullness' resulting from the curve of the spine and shoulder blade is so small that it can be disposed of inconspicuously by easing in the shoulder. Because of this, it is even more important to remember about it, for ignoring it or 'losing' it invariably results in a badly fitting back. Whether the dart fullness is eliminated in a dart on the shoulder and in the neckline, or simply 'eased' and shrunk away, depends on the shape of the figure, on the

style and fabric and also on the fashion line of the moment (thus the fashion for padded shoulders simplified considerably back contour shaping: with its disappearance back shoulder darts have become more necessary).

As in the front, the back dart fullness must be controlled in loose fitting styles also, for the correct *hang of the material* depends on this. Like the front fullness, it can be manipulated and made use of in various fancy ways, often as part of the design, though generally speaking these possibilities are much more limited in the back (see Plate 16 and Plate 9–D).

Instead of being concentrated in one place, **dart fullness** (both back and front) **can be distributed** between two or three points, and in this way so much reduced at each point that some, or even all of it, can be eliminated inconspicuously (as is generally done in the back). This can be done by padding, by shrinking and by other manipulation, much used in high-class tailoring, and involving very skilled work.

The surplus waist fullness recorded by the Waist dart is more often than not used for actual waist shaping, but in some cases it is transferred and *added* to the other dart fullness, front or back, to obtain various effects of line and style.

On page 60 is given a list of methods for dealing with the dart fullness, a list in which only the front dart fullness is considered. The general principle, however, applies to the back fullness as well. Moreover, it must be understood that in most cases the fullness of the Waist darts can be added to it, if it is necessary to increase a particular effect (e.g. a draped effect). The waist itself would then lose its surplus fullness and be more or less close fitting (see Plate 16 and Plate 9–D).

Examples of both front and back dart manipulation are given in the styles in Plates 11–16.

DART POSITIONS

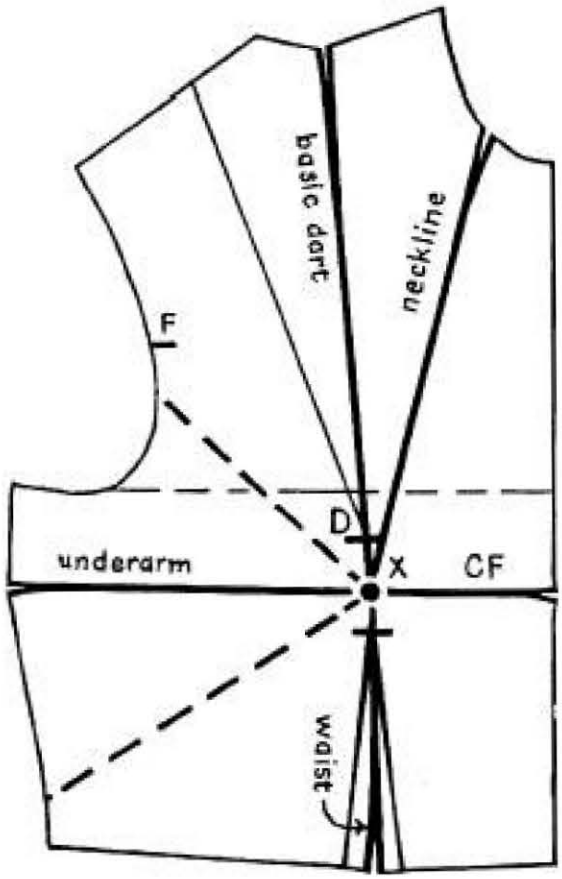


FIG. 1/VI

DART MANIPULATION—general method

The moving of the bust dart fullness from one position to another is done by *closing* (*pinning out*) *the existing dart* down to the Bust point X (sometimes to Shoulder dart point D) and then *cutting right up to this point*, usually from another direction, along a new line previously marked on the pattern. The pinning out of the original dart causes the pattern to curve to the shape of the figure; cutting along a new line makes it lie flat again. A gap appears indicating the *position of the new dart and its correct size* or depth (see Plate 10).

All the new lines must run from the various *edges* of the pattern towards the highest part of the bust.

N.B. The end of a new slash must always meet the point of the closed dart *to make the pattern lie flat*. If it will not lie flat, then some fullness must have been 'lost' somewhere.

The new dart will not usually be of the same size or depth as the closed dart, though it will contain the same 'dart fullness'. This is due to the fact that the darts in their different positions are not all of the same length *as measured from point X*, which is not in the middle of the pattern (FIG. 1). Some are longer and some are shorter, according to how far point X is from the edge from which the slash is made (of course at equal distances from X the depth of all darts is exactly the same). Thus, the CF edge being the nearest to point X, the CF slash is the shortest and the one which opens out least, giving the smallest dart (see Plate 10). Considerable use is made of this fact in designing and fitting, for, to avoid a big dart, one can move the dart fullness to a position (e.g. CF) where it will be so small that it can be eliminated inconspicuously, yet without affecting the correct fit of the bodice.

The possibility of eliminating the dart fullness in such a way is sometimes used, quite mistakenly, as an argument against the necessity of having darts. However, *concealing* darts intentionally is something quite different from *losing* dart fullness accidentally or simply ignoring it altogether. This concealing does not contradict the basic principle of contour shaping, stated earlier in this chapter (and demonstrated by modelling), whereas patterns drafted without any darts invariably do.

Theoretically, the point where all the dart lines meet is the highest point of the bust, point X on the True Bust Line (FIG. 1 and Plate 10), though in garments darts are seldom stitched to this point. In practice, it is often necessary to move the point at which the two lines (of dart and slash) meet, up or down, which lengthens and thus increases one dart at the expense of the other. As further examples show (Plate 12), this device may be used to obtain more fullness at a particular point (e.g. more fullness above a corselet.) It must be stated straight away that the correctness of this manipulation can be proved by modelling. There are also cases when point X is moved nearer or, more often, farther from CF (Plate 11, style B), to follow more closely the actual shape of the bust (in modern figures the distance between the two highest points of the bust tends to be a little more than the half Chest measurement allowed in the bodice draft and sometimes has to be adjusted in practical pattern designing).

Although in theory the different dart positions ensure the same fit, i.e. the same amount of contour shaping, in practice it is found that some positions are more suitable and more becoming than others for certain types of figure. The advantages and disadvantages of the principal darts should be taken into account when making a choice, bearing in mind not only the figure but also the fabric to be used. The Shoulder dart gives more ease (and contour shape) over the actual bust and a neat underarm: it is more suitable for large figures than some of the other positions. The Underarm dart gives a flatter fit, due mainly to the fact that in garments it usually runs off to a point some distance short of its true point on the pattern (i.e. it is artificially shortened). For the same reason it may also give an untidy underarm fit, often with a 'poke' at the end of the shortened dart. All this is much less noticeable on a slight figure, where the dart itself is smaller. A combination of the two darts is often advisable, two smaller darts being easier to manage in sewing than one very big one.

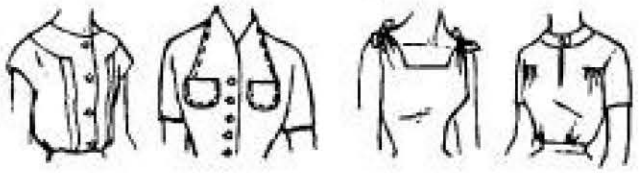
It must be clearly understood that in practice *one never has to calculate the correct depth* of the various darts so long as the *full amount* of dart fullness is given by the basic dart of the block (in this case the Shoulder dart). Should the basic dart be reduced for some reason as it sometimes is for easy fitting garments (see Chapter III, sec. 6), then all the other darts will be reduced and give less contour shaping to the figure. Because of this, it is better to avoid reducing darts on *a bodice block*, and to resort to this only when it is necessary for a particular style.

Finally, it must be mentioned, that when a basic bodice is drafted without any clearly indicated darts (as is sometimes the case in very simple drafting systems), then all the later additions are merely guesswork. There is no real test of accuracy for such a block pattern except by actual fitting, when various major adjustments may already be called for, thus complicating the whole work.

In the **list of methods for dealing with the dart fullness** in its various positions (page 60) this fullness is shown both as a definite feature of the design and as unwanted fullness eliminated or concealed. It is useful to study the list in connection with style sketches. In addition to well-known methods which are always part of the dressmaking and tailoring technique there are many which appear and disappear with changes in fashion, while new ones are frequently invented by designers.

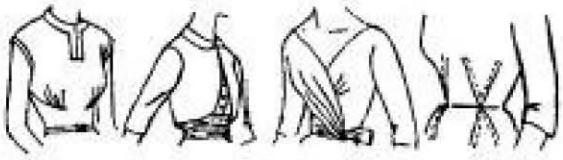
THE SIX BASIC POSITIONS OF THE DART

The bust shaping dart fullness can be used



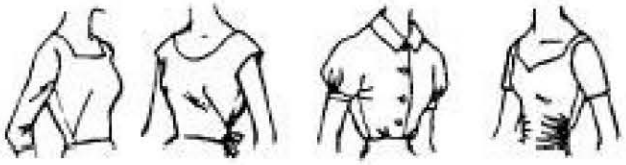
I—ON THE SHOULDER

a. As a simple Shoulder dart stitched to the point
b. As dart-tucks, one or several
c. As gathers
d. As fancy darts (different shapes and lines)
e. Under a yoke (or concealed by a deep yoke)
f. In a slash (usually simulating yoke)
g. Under a pleat
h. In a Panel seam (i.e. a continuous shoulder-to-waist dart)
i. As a draped fold



III—IN THE WAIST

a. As simple waist darts, one or more
b. As fancy waist darts (dart-tucks, slashes)
c. As a pouch (i.e. gathered)
d. In the hem (hanging loosely or flaring)
e. Cut away in short-waisted styles (e.g. bolero)
f. Draped or gathered under a fancy section (panel)
g. Draped in a cross-over style
h. Included in various draped (shirred) effects
i. Appearing above or concealed by a 'corselet'

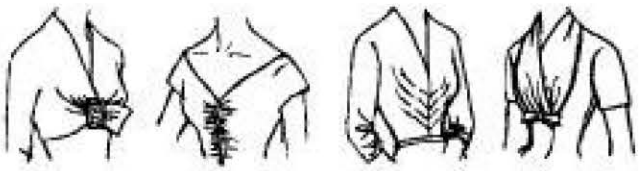


II—IN THE UNDERARM

a. As simple darts, one or more, on bust level
b. As a diagonal dart, slanting up towards bust level
c. As a dart in the armhole (not often used)
d. As gathers on the bust level or lower
e. Concealed in a draped (gathered) side seam
f. As a dart or slash under a belt (waist or lower)
g. As a draped fold (often ending in a sash tied in the back)

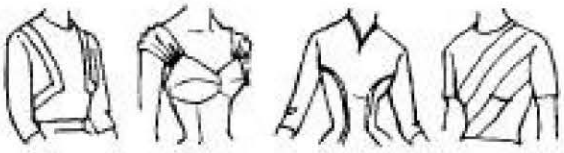
IV—IN THE NECKLINE

a. As a simple neckline dart (mainly in tailoring)
b. As darts, dart-tucks or gathers
c. Under different neck bands
d. In various fancy slashes or draped folds
e. In the top part of a CF seam
f. Cut away in an open neckline (and eased)
g. Draped in various ways in the neckline (e.g. cowl)



V—ON THE CF LINE

a. As darts, tucks or gathers into CF seam (or front edges)
b. In fancy darts or slashes (running into CF seam or edges)
c. Eased invisibly into front edges (into a band)
d. Gathered (draped) into a front section or trimming (e.g. tab)
e. Concealed by a front fancy section (e.g. plastron)
f. Cut away in a front opening
g. Included in various draped effects



VI—CONCEALED IN SEAMS BETWEEN SECTIONS OF BODICE

When the front of a bodice consists of several sections the dart fullness can be taken out in the joining of the separate parts, i.e. *in the seams*, so that no visible darts, gathers, etc., have to be used. The front appears to be flat yet is shaped quite correctly to the contour of the figure, as is proved by the fact that, when pinned together, it will not lie flat.

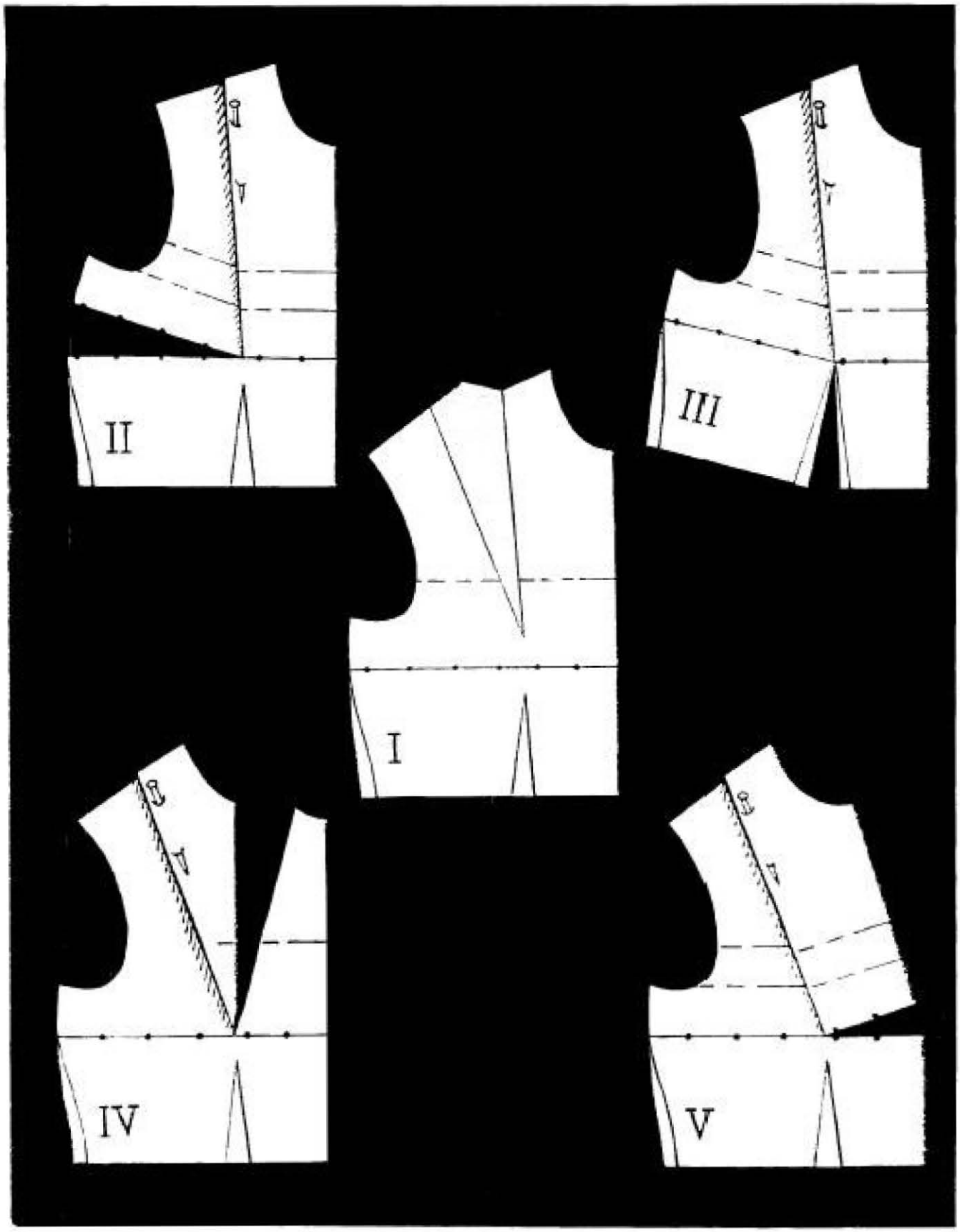
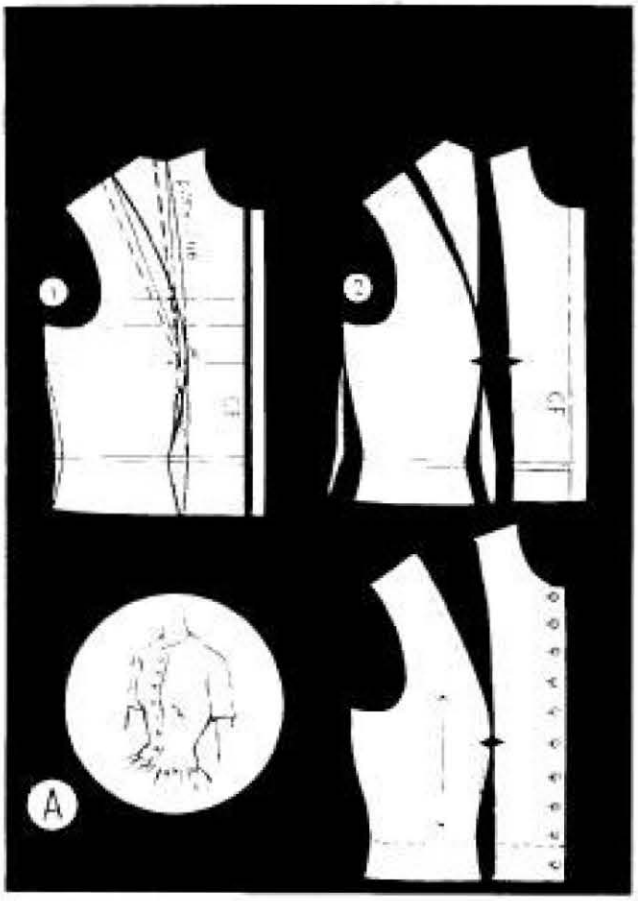


PLATE 10



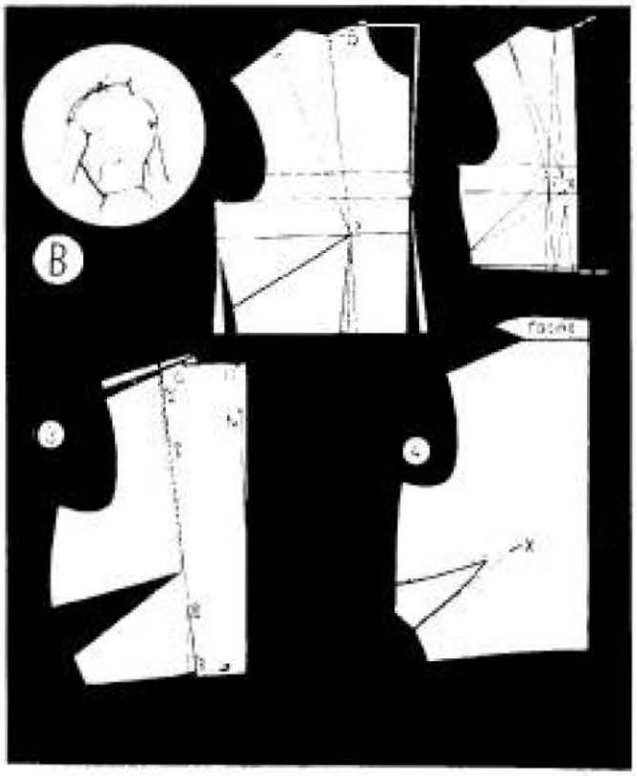


PLATE 11

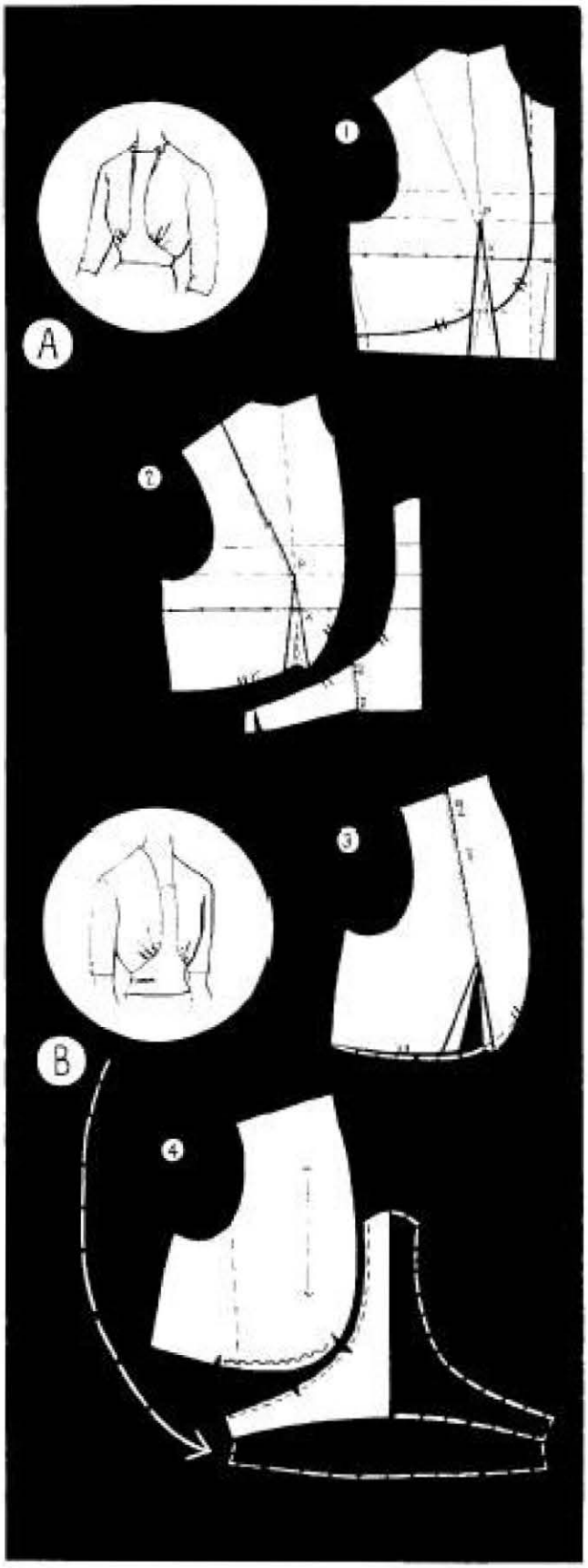


PLATE 12

PLATE 11—DART ON THE SHOULDER (A)—DART IN THE UNDERARM (B)

Style A is an example of Shoulder dart fullness taken out in a **'Panel seam'**, which includes also the Waist dart (i.e. it connects the two darts). It is the classical seam for shaping a bodice to the curves of the figure, as it is most suitably placed over the highest part of the bust, reducing fullness above and below it.

Outline the block to 8–10 cm below the waist for a short basque or a lowered waistline; allow 2·5 cm for a wrap.

First plan the 'Panel line' which is the *inner* edge of the seam, the edge which gives the Panel its *shape*. It may simply follow the Shoulder dart, curving slightly down to point X or—for a better curve—pass just inside point X (FIG. 1). Or, it may start, farther out on the shoulder, 0·5–1 cm inside the Shoulder dart, and pass through X (broken line, FIG. 1) or, in some cases even outside X: it all depends on the shape of the bust and the shape of the Panel required. In each case it ends on the inner side of the Waist dart and must be drawn as a continuous, well shaped curve.

The *outer* edge of the seam, which is a 'fitting line', is curved so that it encloses both the Shoulder and the Waist darts. The two lines touch for 4–5 cm over the bust where width should not be lost (FIG. 1).

Draw a balance mark and cut on the line, *cutting away the darts completely* (FIG. 2). Avoid making the bust curve too pronounced unless a very close fit is wanted, in which case the bodice should be fitted to the exact shape of the bust. Note that all fitting alterations (letting out, taking in) are done on the 'Side front' which has the 'fitting line' of the seam, and not on the Panel, the shape of which is fixed by the style.

Style B shows the dart fullness in the underarm taken out in a **'diagonal dart'**. The style has a high draped-fold neckline for which a Centre shoulder seam must be used. The waist is close fitting; the back is plain.

Outline the block, leaving some paper above neckline and beyond top of CF. Use the Slanted CF and continue it (using long ruler) above the Chest level and beyond CF. This *reduces the waist* by 1 cm and also *widens neckline*, which is essential for this type of high draped neck (FIG. 1).

Mark the line of the diagonal underarm dart from 4–5 cm above the waist to point X (FIG. 1) or, for some modern figures (wide bust), to 2–3 cm to the left of X (FIG. 2), and higher.

Close (paste) Shoulder dart and *half* of the Waist dart (to avoid overfitting). Slash on diagonal line allowing gap to open out fully until pattern lies quite flat. Secure gap with paper underneath, but mark the actual dart only two-thirds of its length, curving the lower edge slightly for closer fit to the figure (FIG. 4).

To complete neckline, 'centre' the Shoulder seam (sec. 8, Chapter III) and mark point Q 2·5 cm outside NP. Continue Sl. CF 6–8 cm up, above neckline, mark O and connect O with Q for the top edge of the 'fold'.

Outline shaped facing on the pattern, trace through and re-cut to use separately; or join it (reversed) to top edge of pattern, to cut it in one with the front.

PLATE 12—DART FULLNESS IN THE WAIST

The style is an example of **Shoulder dart fullness** moved into the waist, where it is **incorporated in the design**. Added to the Waist dart, it provides some of the fullness (gathers or folds) above a flat section usually known as a 'corselet'. This is similar to the use of the dart under a yoke, and a corselet is, in fact, the counterpart of a yoke at the waist and may, like yokes, appear in a variety of shapes.

In these styles **the problem** is to obtain *as much fullness as possible from the darts* before slashing the pattern for any *additional* fullness. This will be more or less difficult according to the shape of the corselet: it may be so high, that it will *conceal* most of the dart fullness concentrated in the waist. Since for the right effect at least 5–7 cm are usually necessary, the darts do not always provide enough.

The Waist dart by itself gives little fullness at its *top end*, too little to show above an average shape corselet. It can be slightly increased by (*a*) adding to it the 1 cm of the Slanted CF and (*b*) by raising its point 5–8 cm, as shown in FIG. 1. After that the Shoulder dart can be transferred into it, adding further to the fullness above the corselet, as well as *shaping the bodice* correctly. If even this fullness is found to be insufficient for the style, more can be obtained by additional slashing which, however, must be done with care as it widens the whole top of the bodice (not always desirable).

Style A: Outline the block to the waist only, for in this style it is easier to add any part below the waist (as in sketch B) later, when all the shaping is done.

Add the 1 cm of the Slanted CF to the Waist dart: the Sl. CF is now ignored and the ordinary CF used. Raise the point of the Waist dart to the Bust Line, i.e. 5 cm above point X. Re-draw the dart which is now bigger.

Plan the style lines, measuring 4–5 cm from CF for the narrow panel, widening it 1 cm at the top to 5·5 cm (for A). For the corselet mark 3–4 cm from the waist up the side seam and about double that near the Waist dart. Close (pin) the Waist dart to draw the corselet line *across it* (as in yokes), giving it a well-shaped curve before running it into the narrow front panel. If the Waist dart is left open this can be done correctly with the help of a short horizontal guide line (FIG. 1).

Draw clear balance marks on either side of the Waist dart (5 cm each way) and cut away the corselet and panel. Paste the dart in this part and tighten further the waist by using the *inner* side seam; to match this reduced waist, move balance mark of top part 1 cm *out*.

In the top part unpin the Waist dart and cut it through the middle to point P. Close Shoulder dart to point P. As the gap opens out, measure between the balance marks the extra fullness obtained and, if it is less than 6–7 cm, slash up to the armhole (broken line FIG. 4) to add another 2–4 cm.

For style B add part below the waist as in FIG. 4.

N.B. For drawing correctly *final line over a slash*, see note at end of chapter.

PLATE 13—DART FULLNESS IN THE NECKLINE

Style A has the Shoulder dart fullness transferred into the neckline, where it is used under a shaped band which has the appearance of a collar, but which is actually stitched flat over the neck gathers. It is, in fact, a reduced yoke which does not extend into the shoulder. Such reduced yokes appear in a variety of shapes and always have some fullness under the edge (without the fullness this would be an 'outside facing').

Style B is similar in cut except that the shaped band is not separated from the rest of the front, but remains attached to it in the middle. This makes it like a style with an 'imitation yoke' (or slash), the cutting of which was explained in Plate 8, Chapter V.

Begin by planning the shaped band (i.e. the yoke), making it 4·5–5 cm wide. Take its lower edge to within 2·5–3 cm of the CF and, for style A, complete the 'collar' outline as in FIG. 1.

For transferring the dart fullness into the neckline mark the line for slashing from a point (A) 5–6 cm inside the CF down to the point of the Shoulder dart (D) or to point X. It is not of much importance in this case through which point the two lines are connected, but if the slash is made to point X (on the True Bust Line) the Shoulder dart must also be closed to point X. Draw balance marks each side of the 'slash line' to fix the position of the gathers.

Cut away the shaped band and then, from the top edge, cut along the line A–D; close and pin the Shoulder dart to the same point (D). As the gap opens out, measure the amount of fullness available for the gathers. If this is not sufficient, the Waist dart could be added to it (pinning it *to the same point* D), but only if a waist without fullness is suitable for the style. This might, for instance, be possible in a dress bodice, but not in a blouse.

If the waist suppression cannot be made use of, and yet more gathers in the neckline are required, a slash can be made from the top edge down to the waist (broken line, FIG. 3) and opened for more fullness as in the yoke style A, Plate 6, Chapter V.

Style C has the dart fullness taken out in dart-tucks of graduated length, which radiate from the neckline.

From half-way down the Shoulder dart rule a guide line S to P, sloping it down to Chest level (FIG. 1). On to this draw the tuck lines, measuring the first from the CF (2·5 cm at the top and 4 cm at the lower end); then measuring the second from the first (1 to 2·5 cm) and so on. Then connect points P, Q and R with the Shoulder dart point (D) or with point X (connecting with X would give just a little more fullness at the neck).

Cut on each line from the neck; close the Shoulder dart; lay cut pattern carefully on to another sheet of paper and arrange the dart-tucks equally at the top (FIG. 2). Re-draw them on the final pattern as shown in FIG. 3: when stitched, they will not, of course, run off to nothing, but have a little fullness at the end.

PLATE 14—CONCEALED DART FULLNESS

Style A is an example of **dart fullness concealed in seams**, i.e. between the sections of a 'cut up' design.

Before planning the style, transfer the Shoulder dart into the underarm ('temporary slash') so that it will not interfere with the planning of the style lines.

Study the design to establish a few guiding proportions and construction lines. Note that of the three sections, the two middle ones are narrow at the waist and, exclusive of the wrap, seem to fit into the space between Waist dart and CF: this would suggest a 4 cm width for each, with the addition of a 2–2·5 cm wrap beyond CF. Together the two sections represent a fancy (sub-divided) 'Armhole Panel', running from the armhole instead of from the shoulder. The remaining part is a Side front.

Seeing the design as a Panel style (compare with A, Plate 11) helps to plan the lines more correctly. Thus, like all Panel lines, the seam from the armhole should be planned over the highest part of the bust, i.e. near the points of the darts (FIG. 2).

Begin by planning the lower part of the first section, which seems to widen slightly towards the top. Therefore, measure from CF 4 cm at the waist and 4·5 cm on the bust level, and draw a construction line through these points. Then plan the two top curves for both seams: these appear as flat 'scallops' above a construction line sloping from armhole to Bust Line level (FIG. 1).

The position of point Z on the armhole can be found and its *level* tested by reference to an imaginary horizontal construction line at right angles to CF: in this style such a line would cross the CF about one-sixth down (i.e. 6–6·5 cm down CF), giving on the armhole a point 8–9 cm from SP. It is not always easy to establish such a point by referring to armhole only, and the final position should be tested on the figure.

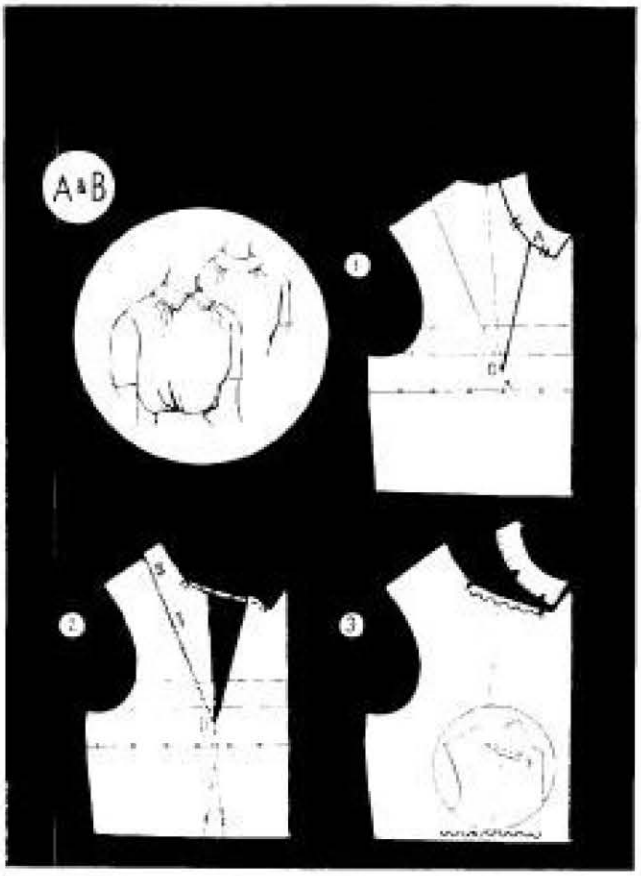
With the help of these construction lines complete the design as shown in FIG. 2. Then cut on the lines, separating the pieces, and close the underarm temporary slash (FIG. 4). When placed together correctly, as in FIG. 5, the dart fullness will appear *between* the sections, i.e. *concealed in the Panel seam.*

Style B is a short **bolero** with most of the dart fullness cut away in the *shortened hem.*

Before manipulating the darts, plan the line of the lower edge of the bolero 2–3 cm above the waist at the side, curving up towards the Bust Line level, where the front edges just *meet* for several centimetres.

Slash through the middle of the Waist dart to point X and close the Shoulder dart, i.e. move it into the hemline. When the pattern is cut on the *new hemline* most of *the dart fullness will be cut away*, and the remainder can be ignored (it will make bolero stand away a little).

The method is not suitable for boleros with a close fitting hemline, when both a Waist dart and Shoulder dart should be used. Underarm darts are less satisfactory for this type of garment.



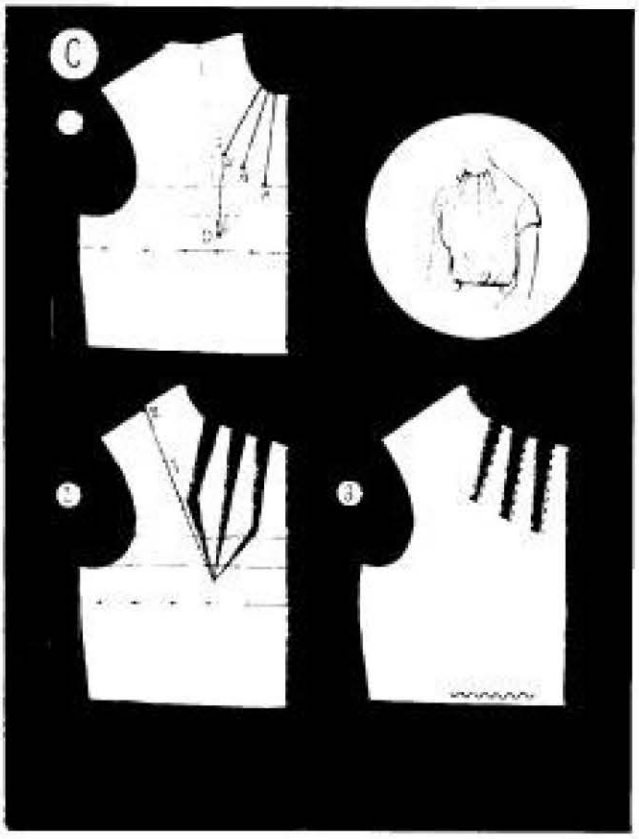
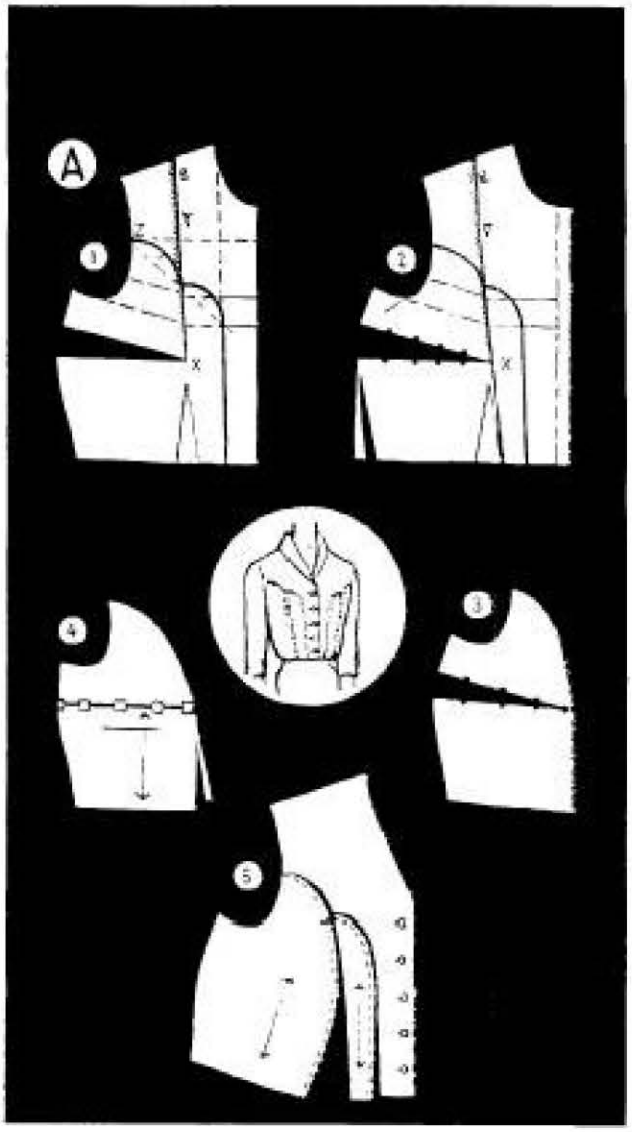


PLATE 13



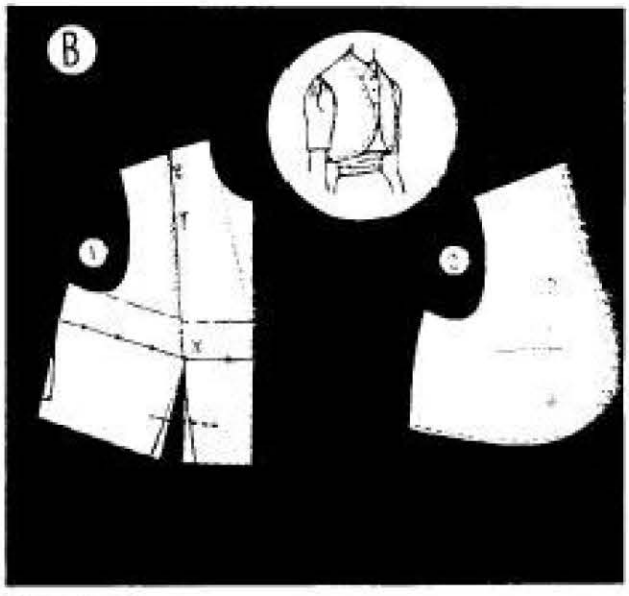


PLATE 14

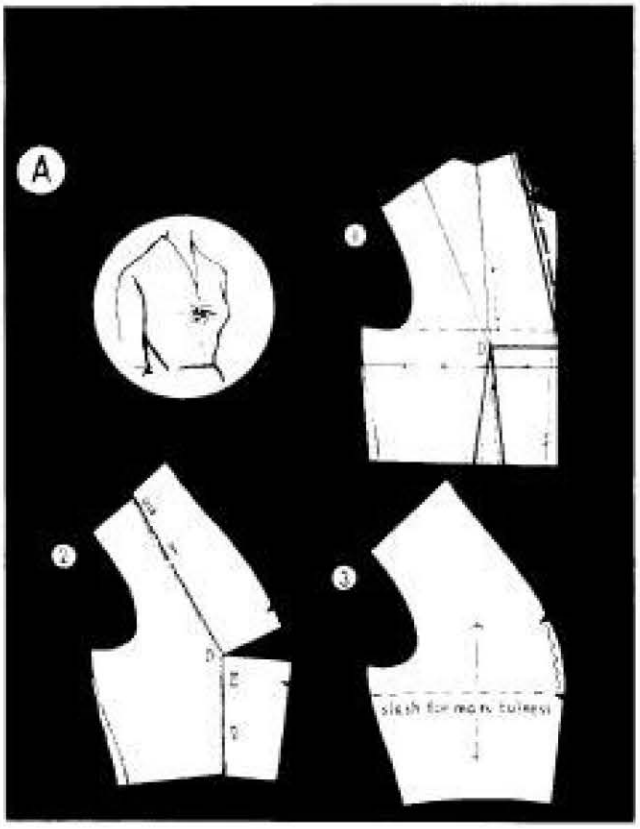
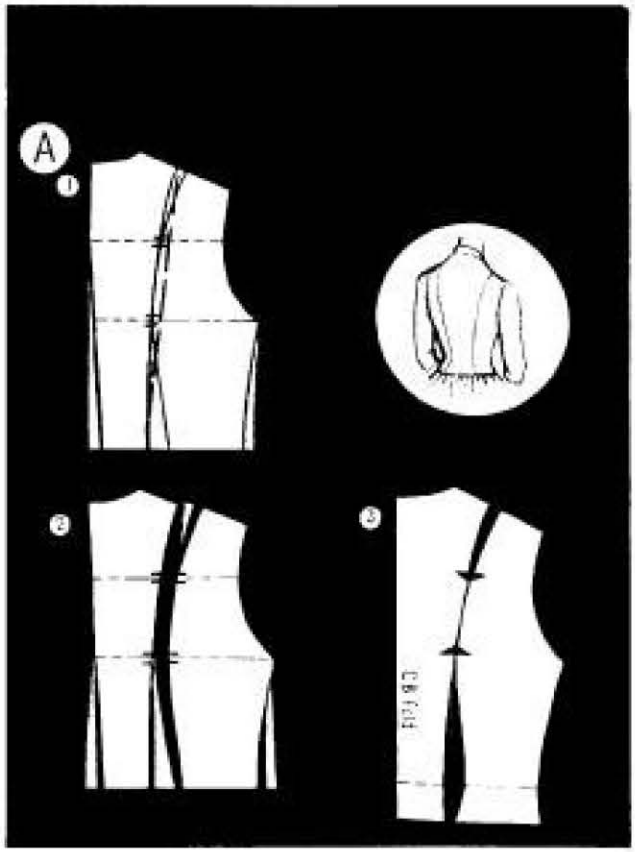


PLATE 15



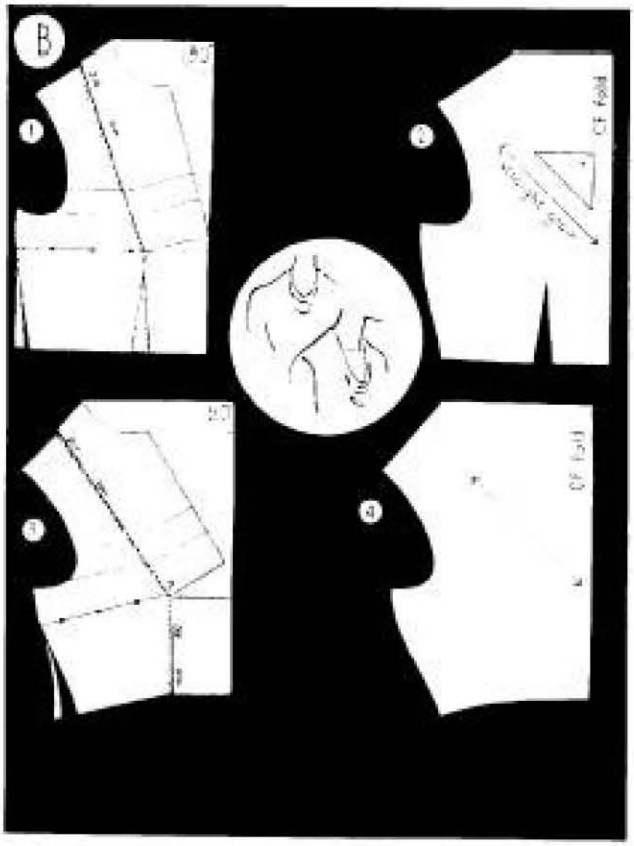


PLATE 16

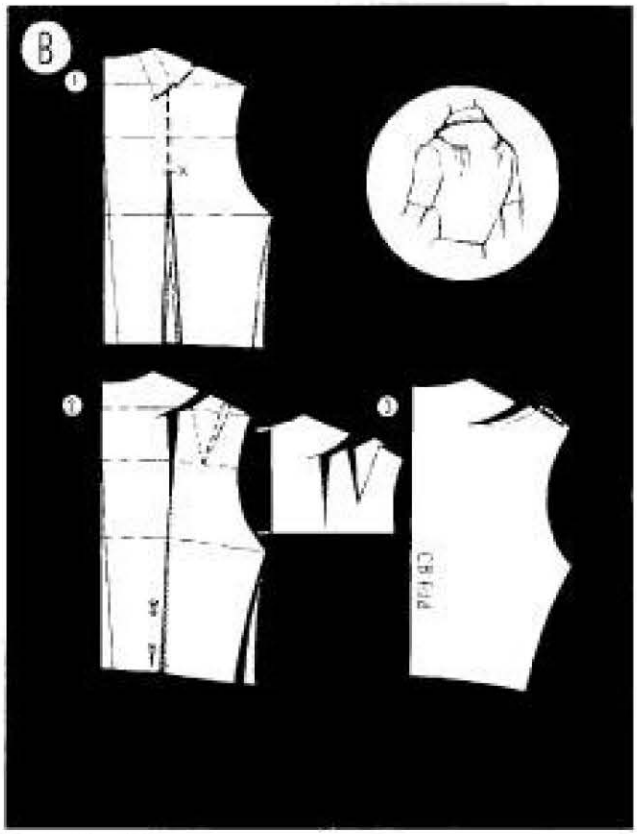


PLATE 15—DART FULLNESS ON THE CF LINE

Style A shows the dart fullness clearly on the CF Line, forming a few folds (gathers) caught in the CF seam.

Draw line of new dart (i.e. slash line) 2–3 cm below the Bust Line to meet the point of the Shoulder dart (FIG. 1). Cut from CF to D and close Shoulder dart to the same point: the gap which opens on the CF is the new dart position. Being short, the amount of fullness it provides is insufficient and must be increased by transferring the Waist dart into it as well. This is possible because of the close fit of the waist (no fullness).

Close Waist dart after first raising its point to the level of the slash (FIGS. 1 and 2). As a result of this the CF gap opens out more, giving more fullness between the balance marks. Before closing the dart, its size can be increased by adding the 1 cm of the Slanted CF to it. The ordinary CF line is then used.

If still more fullness is necessary (for a similar but more draped style) the pattern can be slashed additionally on the bust level (or even above and below it, in several places) from the CF right across to within 0·3 cm of the side seam, and opened 3–5 cm on each slash.

It must be noted that it is always possible to establish in advance how big the Shoulder dart will be in its new position, even before cutting on the new line. This is done by measuring off the length of *the new slash* (i.e. in this case the length of the CF slash) along the Shoulder dart, from D upwards (dotted line—FIG. 1), and then measuring the *size* (width) of the Shoulder dart *on that level* (e.g. 10 cm up from D the 7·5 cm Shoulder dart measures only just over 2·5 cm). The new dart (e.g. on CF) will open to that size. This method applies, of course, to any dart position.

Style B is a bodice with a **Cowl neckline**, and it is not immediately apparent that the dart fullness is on the CF. It can, as a matter of fact, be cut also by transferring the dart fullness into the neckline: the final effect will be the same.

Slash from CF to point X along True Bust Line, and close Shoulder dart down to X to meet the slash. Lay pattern on new sheet of paper, with *lower part of CF to the edge*. Then rule a line from NP to meet the extended CF Line (i.e. edge of paper) *at right angles*: this is the top edge of the draped fold and its length from CF to NP (13–14 cm in FIG. 2) indicates the depth to which the main fold will hang below the neck (measured from NP).

The use of the Shoulder dart alone produces only a high cowl, as in the top sketch. To increase its depth to 20–22 cm (as in lower sketch), the Waist dart must also be transferred into the CF, leaving the waist plain and the bodice below the bust close fitting (thus emphasizing the draped effect of the cowl).

There are other ways of cutting a cowl, but it is important to watch that the correct fit of the whole bodice is achieved without widening or lengthening it *unnecessarily*.

A cowl neckline bodice is more often cut with the true bias of the fabric placed down the CF.

PLATE 16—DART FULLNESS IN THE BACK

Style A is a back with a **Panel seam** which is the counterpart of the Panel seam in Plate 11. All the dart fullness (i.e. both Waist dart and shoulder blade dart) can be concealed in it and, as in the front, this is the classical seam for shaping a garment to the figure.

The position of the Panel seam *on the shoulder* may vary, and it either matches the one in the front or comes some distance away from it (as sometimes happens in tailored garments). In the latter case it is important that the gap between them should be big enough, i.e. 2·5–4 cm; 1 cm or so apart might look like a mistake. In styles where they must start from the same shoulder point the shape and position of the *front* seam generally govern those of the back seam.

Style A shows the *basic position* of this seam, which is in the middle of the shoulder (over the small shoulder blade dart). This would correspond to a half-shoulder position in the front.

Measure from NP half of the shoulder (6–7 cm) and from this point rule a construction line down to the *inside* of the dart at the waist (FIG. 1). Guided by this line, draw the Panel line, curving it smoothly (inwards).

Then draw the other, i.e. the fitting line of the seam, enclosing Shoulder blade and Waist darts. The two lines run more or less together between Back Line and Bust Line (see balance marks—FIGS. 2 and 3).

Cut on the lines, cutting away the darts completely (FIG. 2). Either the Slanted CB or the ordinary CB can be used in waist-length or short styles; for those well below the waist, generally only the ordinary CB is used (often with an increased Waist dart). Add the short basque below the waist to the final pattern (FIG. 3), curving out the seams to fit over the hips. Complete the pattern as usual.

Style B is an example of back dart fullness incorporated in the design and used to provide the gathers in the fancy curved slash below the neckline.

The fullness is provided mainly by the Waist dart, which is closed right up to the point X (highest point of the shoulder blade), somewhere half-way between Bust Line and Back Line. This leaves the waist quite close fitting, i.e. without any visible fullness.

Cut on the lines, as shown in FIG. 2, and transfer the Waist dart fullness into the top, above point X.

The gathers can be increased by transferring also the small (1 cm) shoulder blade dart into the slash, as shown in FIG. 2 and in the detail next to it. The final effect of this can, however, be obtained quite correctly without any slashing, as shown in FIG. 3 (broken line).

For any further fullness, or whenever the Waist dart cannot be transferred (because its fullness is *needed at the waist*), a long slash from the top down to within 0·3 cm of the waist can be made instead (similar to style A, Plate 6).

When dealing with the moving of the darts, there sometimes appears difficulty in knowing exactly how to draw the new, i.e. final, line across the gap that opens as a result of slashing. The difficulty appears mainly when the dart fullness is to be used in the new position not as a simple dart but as gathers, folds, draped fullness and so on. The two edges of the open slash often appear to be on such different levels that it seems impossible to join them by a well-shaped line, at least not from their final points (a and b, FIG. 2 and FIG. 3).

In all such cases, and in whatever position of the dart this may occur, the general rule is to draw the final line passing *outside* one edge of the open slash and *inside* the other (it is usually quite easy to see from the design which must be lengthened and which shortened to be able to draw a good line).

The final line must be kept smooth and well shaped according to what appears to be suitable for the style, and, beyond the open slash, on both sides it must run without a break into the original outline of the pattern, some distance from the gap.

The principle behind it is that the loss on one side is compensated by the gain on the other when the fullness is drawn up and comes into its right position. This cannot apply to a case where the two edges must actually come together and so *must* match (e.g. in a single dart); but in all other cases it is quite a safe method to follow.

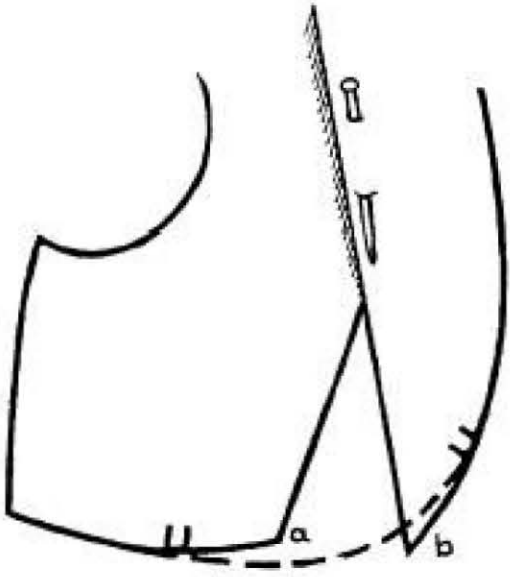


FIG. 2/VI

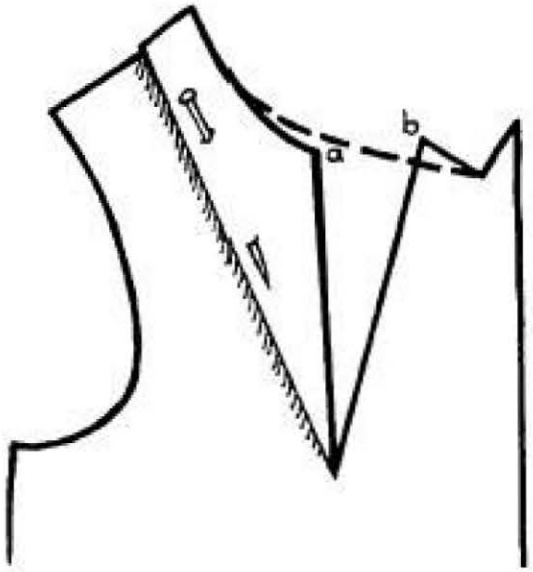


FIG. 3/VI

CHAPTER SEVEN

SLEEVES

There are two fundamental types of sleeve: the Straight and the Shaped.

The Straight sleeve does not follow the natural curve of the arm and therefore cannot mould the arm or fit neatly. It hangs loosely and is altogether of an easy and comfortable fit. It is too long on the forearm, which is the inner, and therefore shorter, curve of the slightly bent arm; it usually has an underarm seam, though not necessarily one matching the bodice seam.

The Straight sleeve is used for a variety of styles—short, mid-length and long—and in a variety of garments, such as blouses, dresses, nightwear, overalls and even coats. It must not, however, be used for any close fitting sleeve style, for although it can sometimes be slightly shaped to the curve of the arm (e.g. by tucks inside the elbow), its construction is basically such that it *does not allow for the bending of the elbow*, and its comfort in wear depends entirely on its being loose enough for the whole arm to move freely inside it.

The Shaped sleeve, whatever its cut and style, is always so constructed that it follows the natural curve of the arm and *provides for the bending of the arm at the elbow*. As this involves fitting the sleeve *to a curve*, the Shaped sleeve has some 'dart fullness' which controls its shape and fit. This type of sleeve, therefore, *must have a dart* or equivalent fullness somewhere, and this 'dart fullness' can be moved from one position to another.

There are two principal groups of Shaped sleeves: those with the shape-controlling dart running *across the elbow*; and those with the shaping dart running *down the arm*, usually from elbow point to wrist. Each group has two principal variants. To the first group belong the two sleeves mainly used in modern dressmaking:

(*a*) the Tight fitting (French) sleeve
(*b*) the Semi-fitting (or Semi-shaped) sleeve

To the second group belong:

(*a*) the Forearm seam sleeve
(*b*) the Two-piece sleeve

The Forearm seam sleeve is an older type not much used nowadays. The Two-piece sleeve is used mainly in tailoring. They will not therefore be dealt with at this stage.

All Shaped sleeves, including the two last mentioned, are adapted from **the Straight sleeve block**, which therefore, is **the primary sleeve block.**

Although there are only a few distinct basic **types of sleeve**, each representing a different method of cutting and shaping it to the arm, there are many different **styles of sleeve**, the patterns for which are made from one or other of the above-mentioned blocks. Some of these styles have definite names, e.g. Bishop sleeve, Bell-shaped sleeve, etc., but the majority can only be described in a general way by referring to their fit (tight, loose, shaped), their length (short, three-quarter, elbow-length, etc.), their outline or shape (e.g. full at shoulder, widening round elbow, narrowing towards the wrist, etc.) or to style details such as cuffs, openings and trimmings.

The first problem, therefore, is to decide which type of sleeve block to use for a particular style. Some styles can be cut from more than one block, as for example the Bishop sleeve or the Bell-shaped sleeve, both of which could be cut from either the Straight or from the Shaped Forearm seam blocks. A tight sleeve could, theoretically, be cut from at least three different blocks, though not with the same results of good fit.

Not all Shaped sleeves are necessarily tight sleeves. When fashionable, many loose fitting and full sleeves are cut to follow the curved line of the arm. But, it is important to remember, that a *Shaped block must be used for all tight sleeves* if they are to be comfortable in wear. Therefore these sleeves naturally form an important group for which shaped blocks are used.

MEASUREMENTS

Three measurements are essential for the Straight sleeve block, with two additional ones for the Shaped blocks:

1. Top Arm
2. Length of Arm
3. Length to Elbow
4. Elbow width
5. Wrist

Top Arm (TA) measurement is taken round the fullest part of the arm (not armhole), about 10 cm below the shoulder, with the tape pushed up well under the arm. It is an easy measurement, not tight. It is the measurement which is used to describe **the size of the arm**, e.g. 30 cm arm, 31 cm arm, 36 cm arm, etc., every 1 cm more or less being taken as a different *size*. (See Table of Sleeve Proportions in Appendix II.)

Length of Arm is taken from the Shoulder Point (SP) passing over the Elbow point down to the *back of the wrist* (above the little finger). It must be taken *with the arm bent at the elbow* to register the maximum length.
Length to Elbow is taken as above, but only as far as the point of the elbow. It must not be taken too long.
Elbow width is taken tightly round the bent arm. If the arm is well bent, giving the maximum expansion of the elbow, the measurement can be safely used as minimum elbow width in tight sleeves.
The Wrist is a fairly close measurement.

PROPORTIONS

Some proportions are constantly referred to when dealing with the construction of sleeve patterns and the fitting of sleeves. Here are the most important:

The Width of the sleeve is its widest part measured across the top, below the crown, on the DC Line (see lower). The **minimum Width** of a sleeve is equal to—

Top Arm (TA) + 5 cm

This proportion is used to describe the **size of a sleeve**, e.g. a 35 cm sleeve for a 30 cm arm. It varies with the type of garment because some garments need wider armholes and therefore wider sleeves:

TA + 5 cm—for dresses, some blouses, etc.

TA + 6–7 cm—for blouses, jackets, etc.

TA + 8 cm—for overalls, nightwear, coats, etc.

The Depth of the Crown is fixed by the **DC Line**, i.e. the Depth of Crown Line which is the **basic construction Line** across the top of the sleeve. The depth or height of the crown (or head) is equal approximately to one-third of the width of the sleeve (slightly more). In drafting, however, it is better to follow a *graded scale* for establishing Depth of Crown *for every other size* (see Appendix II).

The Armhole is related to the sleeve through the TA measurement, and so can be established before fitting the sleeve. As explained above, a sleeve is at least 5 cm wider than the TA measurement. An average comfortable armhole measures:

Top Arm (TA) + 12 or 13 cm

For a 30 cm arm a correct armhole is 42 or 43 cm.

When, after drafting the bodice, the armhole is checked, its size is adjusted to this proportion (for method see Chapter II, the Bodice draft, and sec. 8 of Analysis). The TA measurement is therefore used both for the bodice (the armhole) and for the sleeve, and *connects the two*.

STRAIGHT SLEEVE BLOCK

Top Arm (TA)	30 or 31 cm*	Average measurements for a 92 bodice.
Length of Arm	60 cm	
Length to Elbow	32 cm	
Elbow width	31 cm	
Wrist	16·5 cm	

Cut a rectangle of paper 59 × 35 cm, i.e.

Length of Arm minus 1 cm by Top Arm plus 5 cm

Fold paper lengthwise through the middle and, keeping the fold away from you, measure from the right-hand top corner (T), along the fold, 13 cm for the Depth of Crown (DC) of a 30–31 cm arm. Increase or decrease by 0·5 cm *for every other size*, i.e. 2 cm more or less of TA measurement. (See Appendix II for Sleeve Proportions.)

Through point DC fold rectangle at right angles to the first fold. This last crease is **the basic DC Line**. Mark points U (FIG. 1).

Once again fold the double paper lengthwise through the middle: the new crease bisects the DC Line *twice*. Open out paper flat. Draw lines along all creases.

On the two lines obtained by the last creasing measure from the top edge 6 cm down on the right line, marking point F, and 5·5 cm down on the left, marking B (FIG. 2).

Join by straight lines points U–B and B–T on **the left or back of sleeve**, and T–F and F–U on **the right** or **front of sleeve**. Bisect each of these four construction lines and from the four new points measure: 1 + cm below and 1 − cm above in the back, and 1·2 cm above and 2 cm below in the front of the sleeve. Draw the crown through these points and cut out.

Fold the sleeve again so that the edges now meet over the middle (Top Line) and points B and F appear on the two folds (FIGS. 4, 5). From T measure down *towards the back fold* (which has B at the top) the Length to Elbow (32 cm) and mark E for Elbow point. Fold sleeve across through this point: the new crease marks the **Elbow line** (or Elbow level).

In the middle, where edges meet, measure 7·5 cm above and 5 cm below Elbow level and draw short lines across both edges: these are the **'balance marks'**.

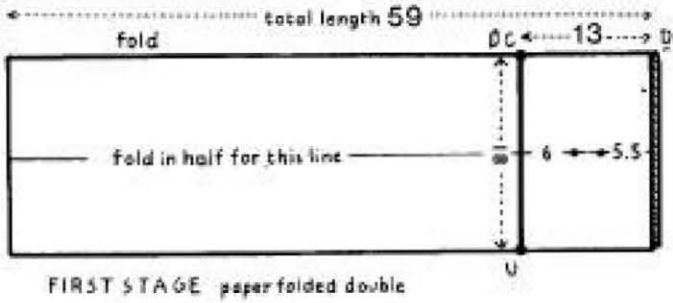
From the wrist measure 2·5 cm *up the Forearm fold* and from here rule (or crease) a line to lowest point on the opposite fold. Cut on this line: the wrist is now *shaped* to be longer on the Back Line and shorter on the Forearm (smooth away any 'points' on the curve). A similar *shaped* line can be marked for elbow length.

The sleeve in its simplest form is now ready and the **four lines of the arm** must be marked on it:

The Underarm Line runs from armpit to *inside of wrist*. Most sleeves have seams on or near this line, also openings. Generally no trimmings or cuff fullness.

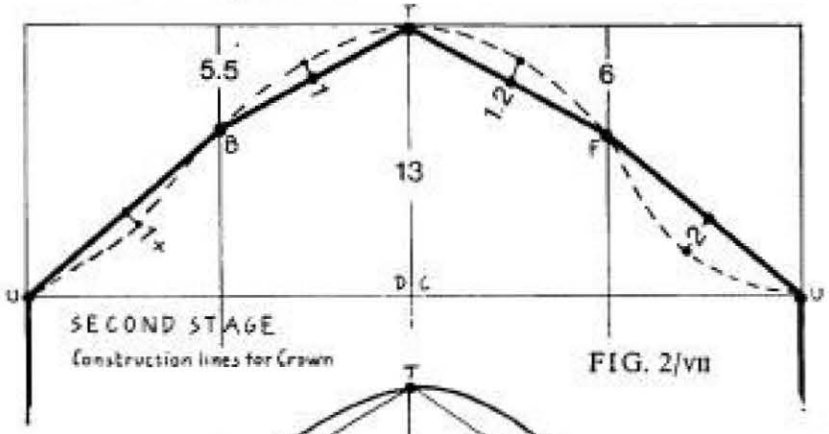
* The same proportions can be used for TA 30 or 31 cm.

THE STRAIGHT SLEEVE BLOCK



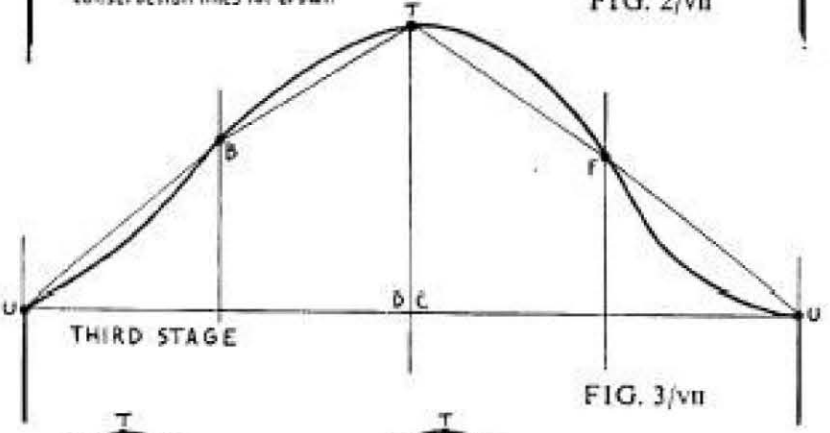
FIRST STAGE paper folded double

FIG. 1/VII



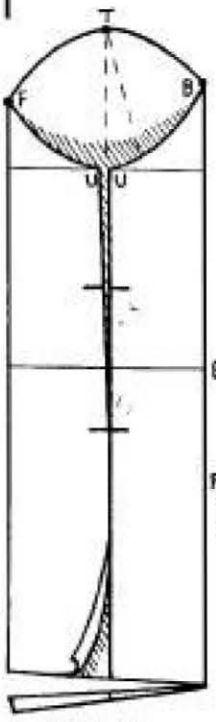
SECOND STAGE
Construction lines for Crown

FIG. 2/VII



THIRD STAGE

FIG. 3/VII



FOURTH STAGE

FIG. 4/VII

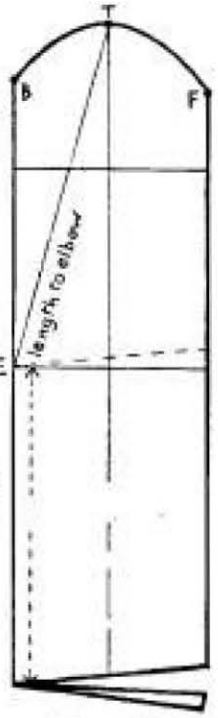
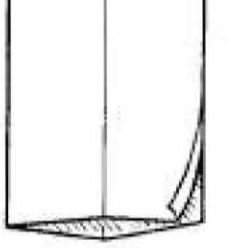
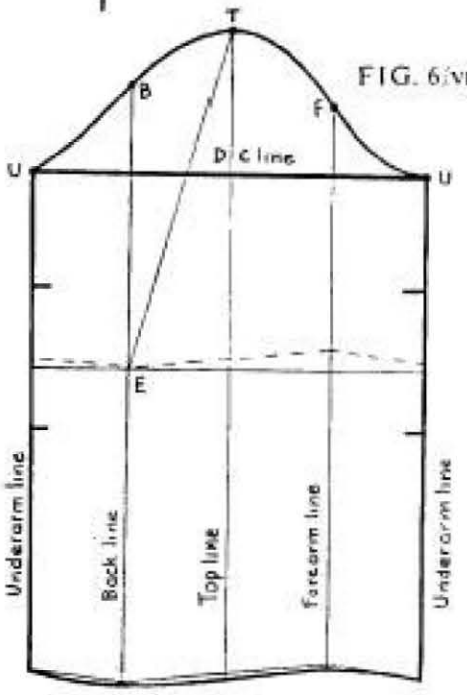


FIG. 5/VII



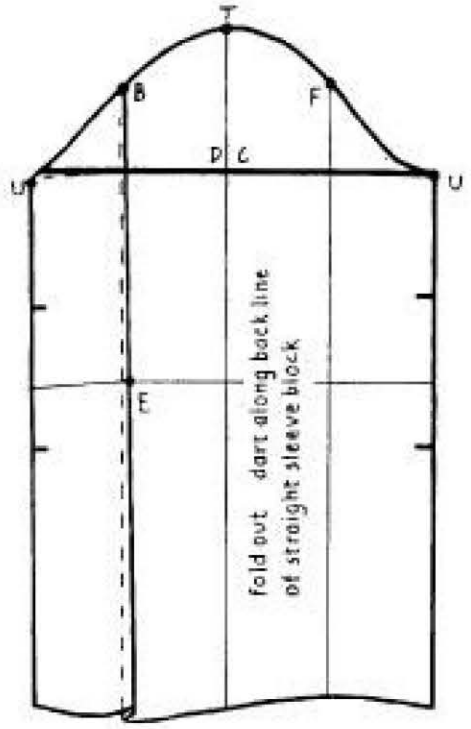
FOLDED SLEEVE

FIG. 7/VII



FINISHED STRAIGHT SLEEVE

FIG. 6/VII



PRELIMINARY STAGE FOR BOTH SLEEVES

FIG. 8/VII

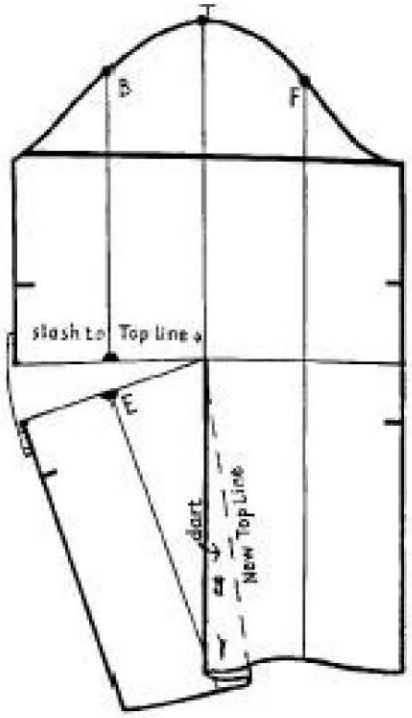


FIG. 9/VII

TIGHT-FITTING SLEEVE

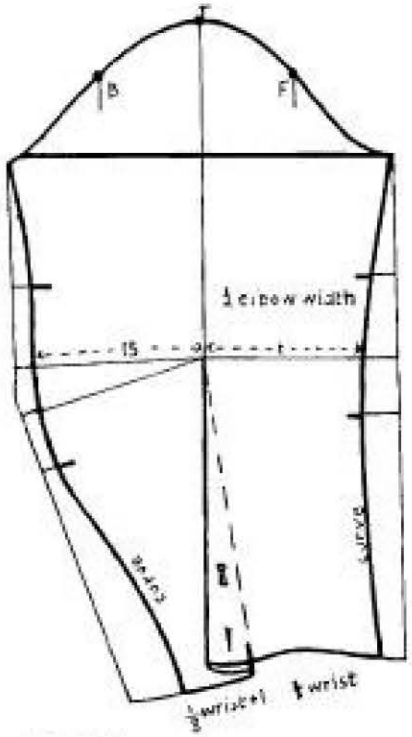


FIG. 10/VII

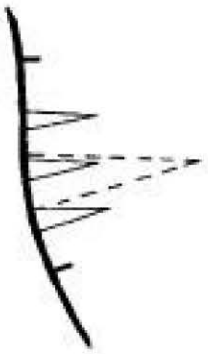


FIG. 12/VII

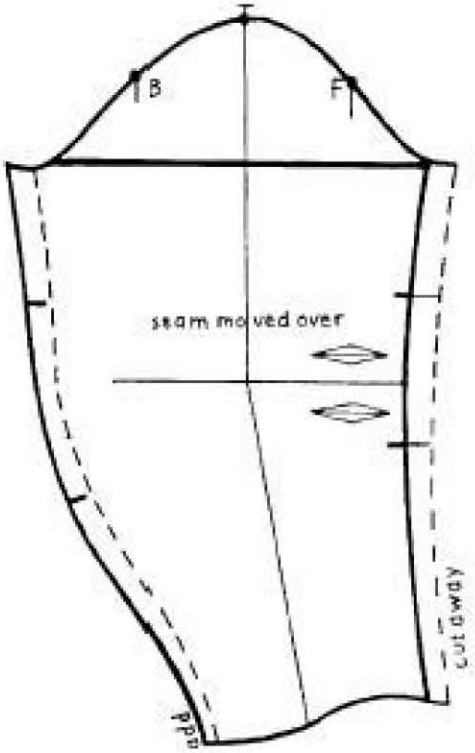


FIG. 11/VII

The Top Line (or Middle Line) runs from shoulder point to the top of the wrist, *above middle finger*. On this line appear many sleeve trimmings, also cuff fullness.

The Forearm Line runs from front of shoulder to wrist *above the thumb*. On this line are used seams but not trimmings or openings, and only a little cuff fullness.

The Back Line runs from back of shoulder to the wrist *above the little finger*. On this line are used many trimmings, most of the cuff fullness, openings, darts and also extra length and ease for elbow bending.

N.B. For *sleeve with higher crown* see Appendix II.

TIGHT FITTING (FRENCH) SLEEVE

The sleeve is cut from the Straight block which must first be *prepared* by 'darting' it along the Back Line (FIG. 8). At the wrist 1 cm is measured each side of the Back Line and this is pinned out as a long 'dart' running off to nothing at the top at point B. The DC Line breaks at B and must be re-drawn straight. The back U now comes below DC Line (it is a good plan to do this darting on the original Straight block before making a copy). This *preliminary stage* improves the fit, and is used both for the Tight fitting and the Semi-shaped sleeves.

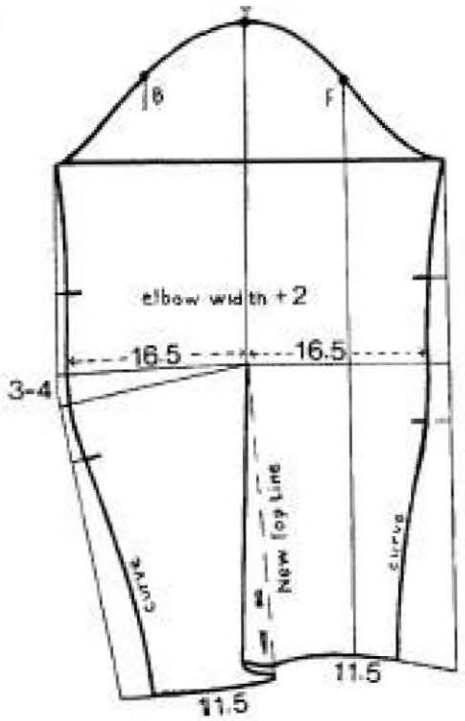
Slash on Elbow line, from the back edge as far as the middle, i.e. the Top Line (FIG. 9). Then, from the wrist to the end of this slash, take out a 'dart' along the Top Line, big enough to open slash to a gap of 5 cm (it is easier if a sharp crease is first made along the Top Line and 'picked up' to open gap). Pin the dart on or near *the new Top Line* and secure gap by pasting paper underneath.

The sleeve is now *shaped*, i.e. the balance marks on the back edge are 5 cm farther apart, and when joined to the front edge, will provide ease for the elbow point. The lower part of the new slanted Back Line is now on the *bias* and will 'give' when the arm is bent.

For a tight fit *reduce the width of the sleeve* by measuring at elbow level, each side of the middle, half of Elbow measurement, and at the wrist $\frac{1}{4}$ of Wrist measurement to the right and $\frac{1}{4}$ + 1 cm to the left of the middle, i.e. of the *new* Top Line (FIG. 10). At the top the full width is retained, as any change of the DC Line affects the size of the armhole.

The lines of the new seam are drawn through the new points, making the front edge a smooth inward curve and compensating on the back edge for any width lost.

The fit of the sleeve is much improved by *moving its seam towards the forearm* (FIG. 11). This is done by cutting a strip of a certain width off the front edge *and adding this width by measurement* to the back edge. The strip is 2·5 cm wide at the top, 2 cm at the elbow and 1 cm at the wrist. It is useful, for this purpose, to leave some paper beyond the back edge of the sleeve when re-cutting it for the final pattern after the slashing and darting.



semi shaped sleeve

FIG. 13/VII

When sewing the sleeve, the 5 cm extra length of the back edge is either eased into the front edge and shrunk away, or taken out in 2–3 small darts planned around the Elbow point (FIG. 12).

SEMI-SHAPED SLEEVE

This is cut in a similar way but with less ease for bending the elbow and with a *looser fit throughout*. After slashing on Elbow line, the wrist 'dart' is made only deep enough to produce a 3–3·5 cm gap on the back edge.

For width reduction (FIG. 13) $\frac{1}{2}$ Elbow measurement + 1–1·5 cm, and $\frac{1}{2}$ Wrist measurement + 3–3·5 cm are measured to either side of the middle, i.e. the Top Line. The extra wrist width allows for a looser fit, not requiring a wrist opening (23 cm). This surplus may, of course, be reduced, and the wrist made tighter; for some styles, when fashionable, it is taken out in a 2·5 cm back dart running from elbow down to the wrist (see Plate 20).

SETTING IN SLEEVES

The setting in of a sleeve can be done quite correctly **on a pattern**, i.e. before a fitting (see Plate 17). A fitting merely checks the size and hang of the sleeve on the figure, adjusting it, if necessary, to the *individual shape* of the shoulder.

CORRECT HANG OF SLEEVE

A sleeve hangs correctly when it falls **in a perpendicular line from the shoulder point**, swinging neither to the front nor to the back (a slight swing forward may be preferred in some cases). The lengthwise straight grain is *in line with the upper part of the arm*; and the crosswise straight grain runs in a horizontal line *across the top of the arm*, without sagging at the ends (sagging produces creases on Forearm and Back line of sleeve).

The fit on the shoulder changes with fashion (see Chapter VIII). Sleeves may be set in high, *above* the shoulder (with or without visible fullness), or they may just follow *the natural edge of the shoulder* or be set in slightly *below* the shoulder. There are also fancy ways of joining sleeve to bodice (e.g. the Raglan, or Drop-shoulder). In every case, the basic rule for the correct hang of the sleeve remains unchanged.

Since the *shoulder is a curve*, the top edge of the sleeve cannot fit smoothly over it unless there is a little extra length (fullness) to fit the sleeve over the prominence of the shoulder bone. The function of this fullness is the same as that of the Shoulder dart, without which a bodice front cannot be fitted over the curve of the bust: it moulds the top of the sleeve to the shape of the shoulder and 'pulls up' the sides of the sleeve.

The higher a sleeve is fitted on the shoulder, the more pronounced will this fullness be. It must not be confused with any extra fullness added to the sleeve as a trimming or fashion detail, though the origin is the same (see Chapter VIII). When sleeves are fitted very low the necessity for this extra fullness disappears.

It will be easily understood that figures with prominent shoulder bones need more ease (i.e. 'dart fullness') and the raising of the crown, with the consequent lengthening of its outer edge, is a frequent adjustment for them.

Sleeve patterns, therefore, must measure a little more round the head or crown than the armhole into which they fit (average 2–2·5 cm), and allowance for this is made in the block.

It is advisable to check the crown edge (by direct measurement) and to ascertain that the connection between the armhole (already checked) and the sleeve is correct. If the two measurements are far out, it more often than not indicates careless measuring, since the two should match owing to their common connection with the Top Arm (TA) measurement.

The extra fullness is distributed in the upper part of the armhole, *above points B and F*, mainly to the front of the shoulder seam (1–2 cm) and a little to the back (0·5+ cm). With the exception of a few special cases, the sleeve in the lower part of the armhole, *below points B and F*, is usually quite flat.

CORRECT POSITION OF SLEEVE IN THE ARMHOLE

There is only one correct position of a sleeve in the armhole—the position for which it is actually drafted. Already when drafting the sleeve the various *points of the crown are planned to correspond to definite points on the armhole*: the highest (T) to the highest part of armhole and shoulder, the lowest—to the most cut-out part, and so on. When every point of the sleeve crown has been matched to its corresponding point on the armhole the sleeve will hang correctly, as described above. There is, therefore, no reason for trying out various 'methods' of setting-in sleeves in the hope of finding one which is foolproof and suitable for all types of sleeve, whatever their construction.

The most convenient way of setting in sleeves is to mark definite **'Inset points'** on both sleeve and armhole. In principle, any points can be selected and used for this purpose: this does not affect the fit of the sleeve. Once these points are fixed on the sleeve, the **corresponding Inset points on the armhole** must be established with the greatest accuracy.

In practice, the middle of the crown (point T) is often used as the only Inset point which is matched to the highest point of the shoulder. The use of one Inset point, however, demands skill and experience in fitting sleeves. The matching of underarm seams of sleeve and bodice (also frequently used) is not recommended because the position of seams may vary and upset the hang of the sleeve completely. Seams are, in fact, the least reliable Inset points.

The most reliable and convenient Inset points on the sleeve are points B (top of Back Line) and F (top of Forearm) with the middle point T used additionally.

It now remains **to find the points corresponding to B and F on the armhole of the bodice**. The method is illustrated in **Plate 17** (opposite).

PLATE 17

Place the back of the sleeve crown to the back armhole, first matching point T to the back shoulder seam (FIG. 1). Since the curves do not fit into each other completely, it is usually necessary to move the sleeve pattern, gradually bringing each point of the sleeve to its corresponding point on the armhole. When point B of sleeve touches armhole, the corresponding point B on the armhole is marked *not exactly opposite*, but 0·5 + cm *higher* to allow for some ease in the sleeve crown (FIG .1).

To continue matching the two curves below B it is more convenient to *reverse the sleeve* (FIG. 2). With sleeve now *wrong side up* and the two points B *matched* continue bringing up

sleeve to armhole until the Underarm of bodice is reached. This usually leaves a little of the sleeve to go over to the front of the bodice, with the result that the sleeve seam comes to the front of the bodice seam. This is an advantage but is not essential in every case: the sleeve seam may match that of the bodice. With a few exceptions, the seam of the sleeve should not be allowed to come to the back of the bodice seam, as the result is usually a very uncomfortable fit, especially in tight sleeves.

Continue up the front armhole (FIG. 3) with the sleeve *still reversed* until point F touches the armhole. Mark the corresponding point F on the armhole *exactly opposite* (or even slightly higher). The remaining length of the sleeve crown should be at least 1 cm more than the remaining part of the armhole, to provide for the *ease* over the shoulder bone.

Once the correct Inset points B and F are established, they do not have to be changed, except possibly after a first fitting, when *a more forward position on the figure*, with point T 0·5–1 cm *to the front* of the shoulder seam may be preferred.

Should the underarm seam of the sleeve come to the back of the bodice seam, then point T should be marked not in the middle of the sleeve but 1 (1·5) cm to the front of it, keeping it, however, on the same level or height. Then, placing the forward-moved point T to the shoulder seam, it will be found that point B on the armhole comes lower, and the sleeve edge B–U matches the remaining armhole B–U, or even projects into the Front. The back half of the sleeve has become wider than the front part.

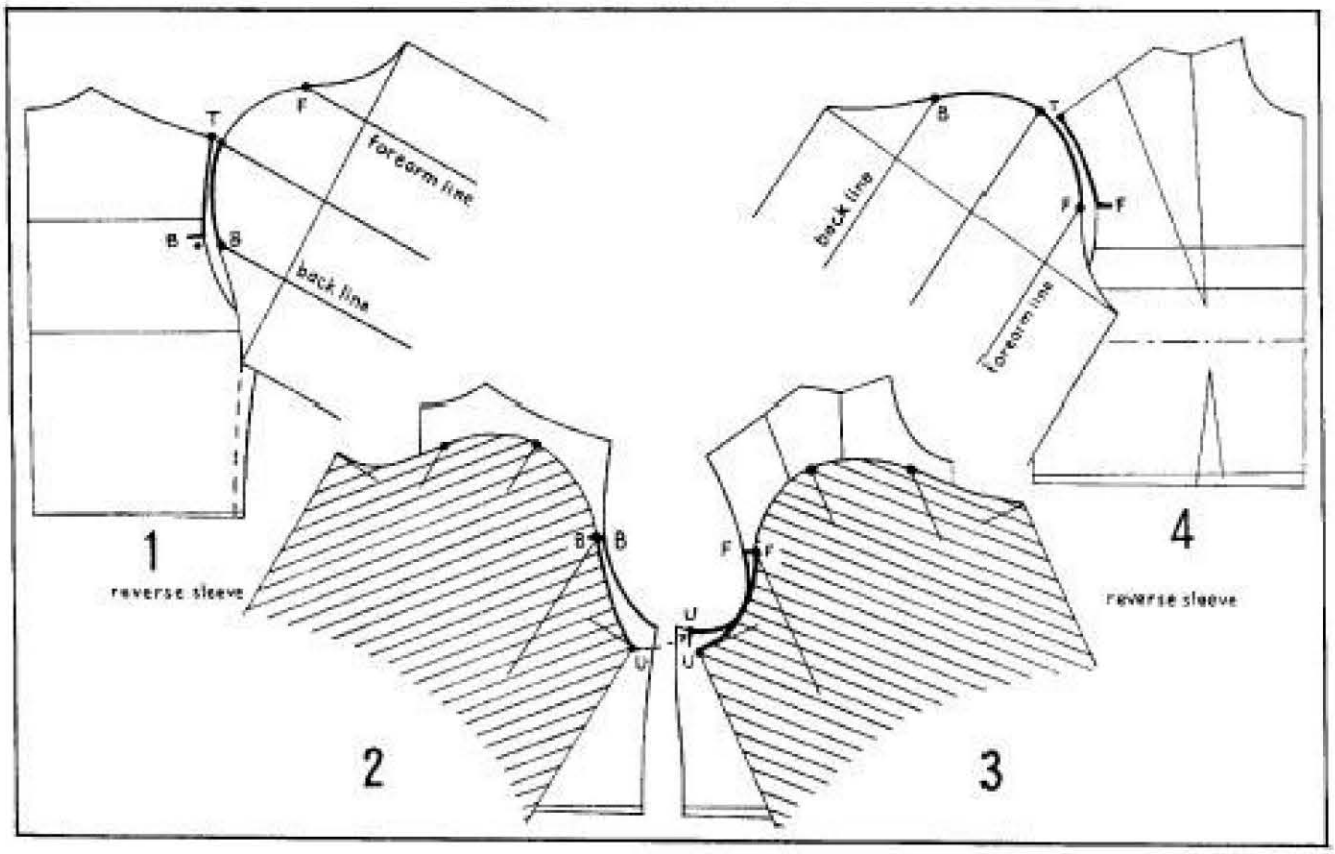


PLATE 17

CHAPTER EIGHT

DESIGNING SLEEVE PATTERNS

Before describing any fancy styles cut from the Straight and Shaped sleeve blocks, it is useful to consider a few basic methods used in sleeve designing, and to see how with the help of these a great variety of style effects in sleeves can be achieved.

Trimming details apart, different style effects are achieved mainly by change of **sleeve outline** (silhouette) and by the way the sleeve joins the bodice. However, the more fancy **ways of setting in sleeves** (Raglan, Drop-shoulder, etc.), as well as sleeves cut in one with the bodice (Kimono), belong to more advanced cutting, so that only **variations of simple set-in sleeves** can be considered here.

As already stated, a sleeve may follow the curve of the arm or hang loosely and somewhat shapelessly round the arm; it may *stand away* from the arm by being very full. The fullness may be evenly distributed or concentrated mainly at the top, or above the wrist, or just in the middle, round the elbow; it can be arranged in many different ways and combined with close fitting effects: all this gives a sleeve a definite *outline or silhouette* which is the *main feature of a sleeve style* and which changes with fashion. A few basic methods for arriving at these effects are given below.

The way a sleeve is set into the armhole may vary, sometimes to follow a fashion trend, sometimes to suit a special style or type of garment. Thus, it may be fashionable to set in all sleeves rather low, i.e. below the shoulder bone; or, on the contrary, high, well above the shoulder bone, usually emphasizing this high effect by raised fullness in the sleeve crown or even combining it with a *squared shoulder*. In fact, when squared shoulders are fashionable, the sleeve is seldom used in its basic shape, but is usually raised.

LOWERING THE CROWN OF THE SLEEVE—FIG. 1

It is sometimes necessary to lower the crown of the sleeve, either to follow the fashion of 'low' set-in sleeves or for a particular style. The middle point of the crown, point T, is brought down 1–2–2·5 cm and the crown is re-drawn through this new point passing usually 0·5–1 cm below B and F. The **loss in height is compensated on the bodice** by lowering armhole, i.e. lengthening shoulder (usually a little more than crown is lowered) and adding to Back and Chest width.

Sometimes the new crown line *must* pass exactly through points B and F, because there is no compensation on the bodice part: such cases, however, belong to the Drop-shoulder cut, which affects only the *top part* of the armhole, *above* points B and F.

When lowered, the crown (or head) of sleeve loses some of its length round the edge. It usually loses the 2–2·5 cm extra ease (or most of it). This, however, need not be replaced, as its main purpose was to provide a contour-shaping 'dart' for the *prominence* of the shoulder bone: with the sleeve fitting *below* the shoulder bone, this dart is no longer necessary.

The sleeve may lose even more than that and thus need a smaller armhole, which, of course, is quite logical with a lower setting-in of sleeves. However, if a small armhole is not acceptable (e.g. in a shirt blouse), then the width of the sleeve must be increased (by adding on the seam).

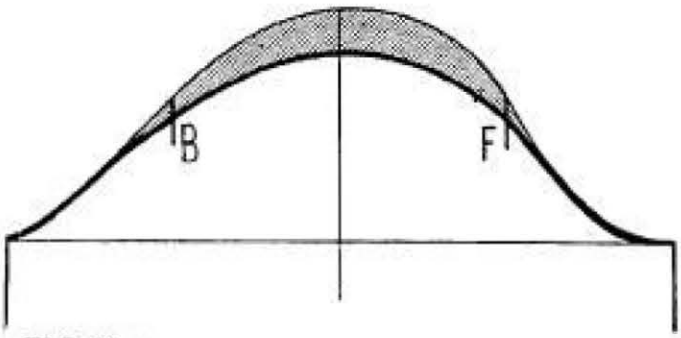


FIG. 1/VIII

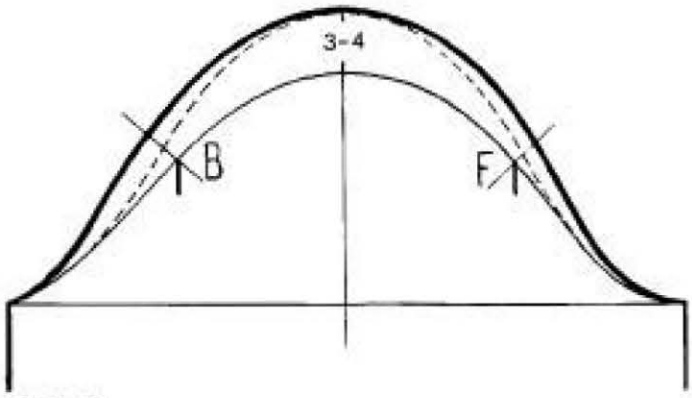


FIG. 2/VIII

As already stated, the *armhole* is adjusted to a *lower fit* by lengthening the shoulder, and increasing the Chest and Back width; finally, the whole armhole is lowered 0·5–1 cm at U point, to regain either the whole or at least most of the *size lost in re-shaping* it.

Needless to say, careful measuring of both armhole and sleeve crown is essential, as in these cases no *unnecessary* fullness must remain in the sleeve crown (maximum 1 cm). It is difficult, however, to give more precise figures for everything depends on the exact effect aimed at, and on the size of sleeve and armhole.

RAISING THE CROWN OF THE SLEEVE—FIGS. 2, 3, 4

This may be necessary not only for a higher setting-in of sleeves, but also for obtaining the 'raised' effect which at times is very fashionable. For the ordinary high setting-in, well on the shoulder bone, the usual Depth of Crown (DC) is generally sufficient; or, it may have to be raised only very little. More often, however, the whole sleeve crown is required to 'stand up' or 'stand away' from the shoulder and arm, and then the crown must be definitely raised, at least 2–3 cm (FIG. 2). Raise point T 2·5–3 cm, up to 4 cm, and redraw the crown through the new point, allowing approximately half of this height above B and less above F, or—for a different effect—adding only a little height above these points (broken line—FIG. 2).

The raising of the crown gives more length round the crown edge, making it too long for the armhole. This extra length, found by measuring between B and F, is usually reduced by gathers or small darts emphasizing even more the high fit of the sleeve.

It is not usual, except for very special effects, to raise the crown more than 4 cm without adding more width as well. In the more elaborate cases, therefore, and for a variety of fancy styles (such as Leg o' Mutton sleeve and others) the addition of extra *height has to be considered together with the addition of width*, as the correct balance between the two is of the utmost importance for achieving the required effect (see FIGS. 3 and 4 and examples given in Plates 19 and 20).

The method illustrated in FIG. 3 shows the **addition of height and width simultaneously**: according to the height to which the two halves of the crown are raised, the sleeve acquires a proportionate amount of width across the top. The additional height can actually be measured in the middle, above the horizontal slash.

The addition for width (in FIG. 3) is made from a very high level, slashing the sleeve pattern just 3–5 cm below the DC Line. This can be done, however, from any level between the Elbow and the DC Line (see FIG. 4).

The 'raised' effect and the comfortable fit of the sleeve are improved if points B and F are not allowed to come up quite so high. It is, therefore, advisable to lower them by half of what they have gained through this operation. The final outline of the crown is drawn from the *raised* point T, passing through the *lowered* B and F, down to the *usual* point U. The lowest part of the crown remains little affected by the height and width addition, which appears only in the top part, between B and F, where it can be ascertained by direct measurement. After *comparing the new length* with the **usual length of the crown between points B and F**, it is quite easy to see what extra fullness there is to be disposed of according to the style.

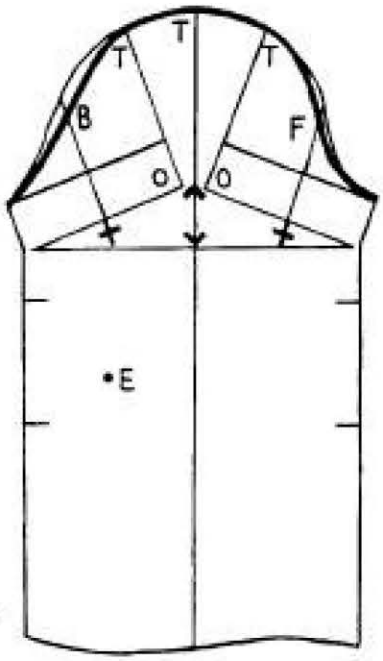


FIG. 3/VIII

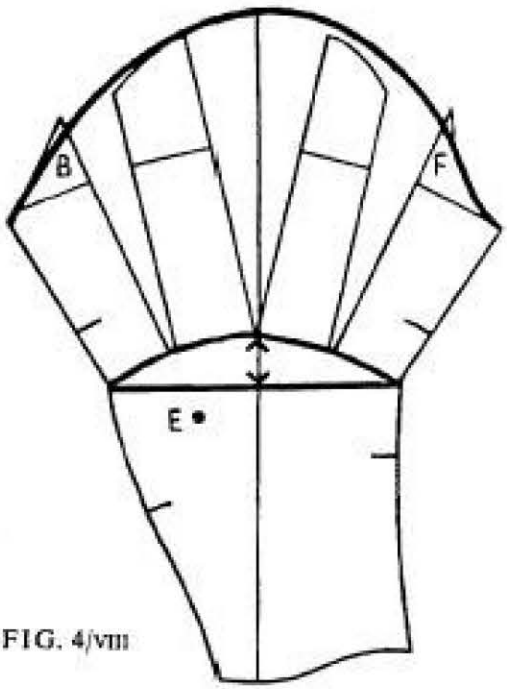


FIG. 4/VIII

Another method of raising the crown with width addition is shown in FIG. 4. This time, just to give another example, the width is added from a lower level (it can, of course, be added in this way from any suitable level above elbow).

There is, however, no particular advantage in cutting up the top part of the sleeve into more than 4 sections, provided one remembers to lower points B and F and learns to draw a well-shaped crown free-hand, unless there is considerable fullness to be added, when it might be easier to outline the crown with more points to follow.

ADDING WIDTH TO SLEEVES—
FIGS. 5, 6, 7, 8

There are several basic methods of adding width according to the *outline* of sleeve required.

The simplest case of width addition arises when a sleeve has to be made just a little looser (for a style or for a bigger size of arm). The correct way of adding 2 cm extra width is by inserting 1 cm through the middle, down the Top Line, and dividing the other 1 cm equally between the two edges of the seam (0·5 cm on each). But both in this case, and when the *whole* addition is made on the seam (possible for small amounts only) points B and F (on sleeve) should be moved down by the same amount unless the armhole size is also changed and its lower part increased. Sleeves are seldom eased into the lower part of of the armhole, except in a few special fitting cases (e.g. very big top arm muscle).

For a variety of style effects, width can be added in several different ways. It can be added right through, slashing pattern down the middle, i.e. on the Top Line, and also on the Back Line and Forearm, and inserting the necessary amount of width from top to bottom, so that both the crown and lower edge gain extra fullness.

The **width** may also be **added in the lower part only** (FIG. 5), the crown remaining quite flat. For a fairly full effect, the biggest amount is usually added in the Back Line slash, less on the Top Line and still less on the Forearm. But for smaller amounts, the Top Line addition can be omitted and in many styles only the Back Line slash is used, this being the part where the 'stand-away' effect of the sleeve is mainly wanted both in full and semi-full styles. In some cases an even distribution might be preferred.

The method in FIG. 6 shows a **combination of width addition right through** (e.g. 5–8 cm) **and** width addition **in the lower part** only. This is suitable for a style with a pronounced 'pouch' above the wrist, but only slight fullness higher up. The crown also has extra fullness to be dealt with, usually gathered.

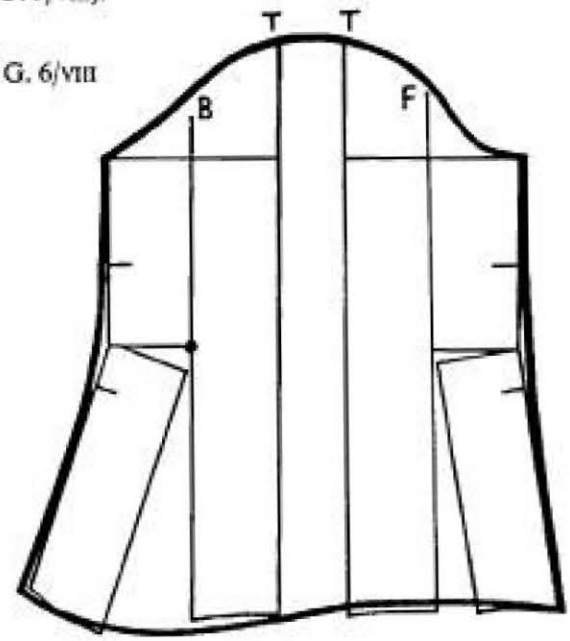
In FIG. 7 is shown **fullness addition to the crown** without increase in wrist width. A Straight sleeve, however, already has some fullness in the wrist, so that the amount added at the top may be just enough to balance it.

All these methods can be applied to sleeves of any length. Where a long sleeve style is full but has a tight-fitting lower part (a long or high cuff), it is better to use a Semi-shaped or Tight fitting block, cutting off the wrist part to the required height (12–15 cm) before widening the top part. After cutting away the 'cuff', the **Elbow dart** must first be eliminated **by transferring it into the lower edge, above the cuff** (FIG. 8).

It is sometimes necessary to make a Straight sleeve cling a little more to the arm, and there are some simple ways of achieving this without the actual use of the Shaped sleeve block. The Underarm seam can be slightly curved by taking it in 1–2 cm on both edges at elbow level (FIG. 9/VIII).

FIG. 5/VIII

FIG. 6/VIII



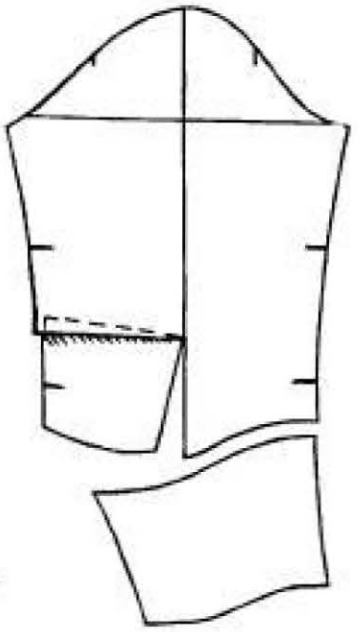


FIG. 8/VIII

Sometimes tucks or small darts are used *inside the elbow* to shorten the Forearm and to give it a slight curve, so that the sleeve clings more to the arm (FIG. 9). They may also be used on Tight sleeves.

Finally, it is always possible to *shape* a Straight sleeve by the standard method used for the Shaped sleeve blocks (see Chapter VII). Slash the sleeve pattern on Elbow line from the back edge to the middle, and then, on the lower edge, take out a small (2–2·5 cm) dart to reduce the width of this lower part of the sleeve, instead of tightening it entirely on the seam.

This method is much used in loose, three-quarter length sleeves, to make the fit a little closer to the arm.

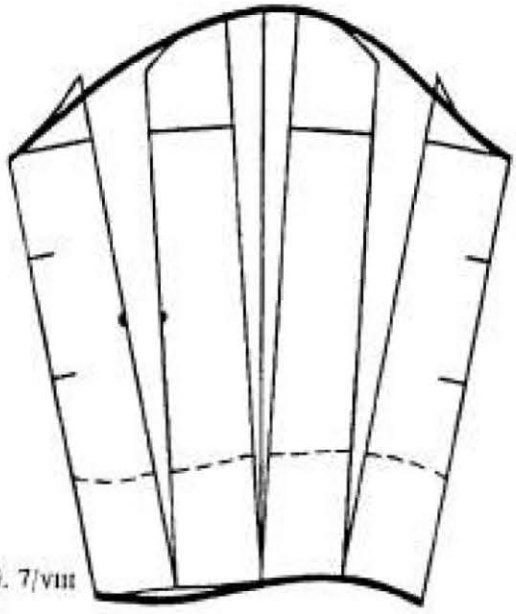


FIG. 7/VIII

CUFFS

Cuffs are either straight or shaped. When cutting cuff patterns one must consider, in addition to their style and size, also their fit (tight or loose), the thickness of the gathers that will fit into them and the method of fastening (link, overlap, size of buttons, etc.).

Straight cuffs are straight bands varying in depth from 1 to 8–9 cm; they are seldom deeper, except in coats.

To work out their size, i.e. their *total length*, it is usual to add to the Wrist measurement 6–7 cm, according to the tightness. This allows 4–5 cm for **ease** and 2–2·5 cm for **overlap.** A usual shirt blouse cuff, 4–5 cm deep, is a straight band 22–24 cm long (average 23 or just over).

Straight cuffs can be made to fit tighter when they are narrow and the gathers not too bulky. They are often also looser fitting, especially when deep, because the arm widens above the wrist. Deep turn-back cuffs with links, for instance, are usually 26–30 cm long. A cuff without an opening must be wide enough to slip easily over the hand (establish this by measurement).

Shaped cuffs are always wider on the top edge, either to follow the shape of the arm or to produce a 'stand-away' effect (e.g. for a turn-back gauntlet). Their pattern may be cut from a straight band slashed and widened on the top edge, as required by the style; or from the lower part of a Tight (Shaped) sleeve: this is particularly suitable for deep, close fitting cuffs (e.g. 12–15 cm high).

The **depth of a cuff** is wholly or partly *deducted from the total length of the sleeve*, according to the style (pouched or plain) and *tightness* of the cuff. With a tight cuff less is deducted, sometimes nothing, to provide *more length* for a pouch or for *easy bending at the elbow*. With a very loose cuff, the *combined length* of cuff and sleeve must be just right for the length of the arm.

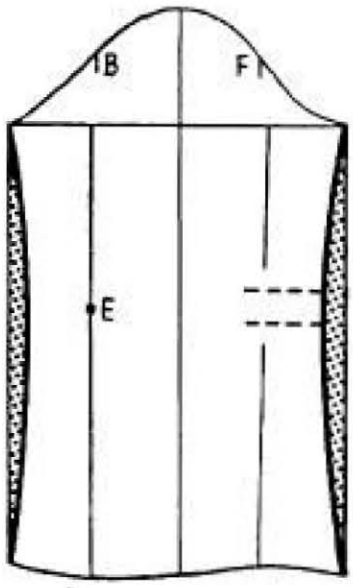


FIG. 9/VIII

PLATE 18—STRAIGHT SLEEVE BLOCK IN SIMPLE ADAPTATIONS

Styles A and B are two variants of a sleeve usually known as 'Coat sleeve', which is of a comfortable and loose fit, and is much used in coats. It is, in fact, the Straight sleeve block used exactly as drafted, or widened a little to fit a large armhole. Sometimes it is the fashion to use this rather shapeless type of sleeve in most garments, including dresses; but more often it is reserved, in addition to coats, for overalls, pyjama coats, various kinds of simple (straight) jackets and most blouses. It can be used also as a short, elbow length or three-quarter length sleeve.

Style A shows the lower edge, i.e. the wrist line, cut *quite straight*. This is often more suitable for deeper cuffs, particularly in heavy material, and of course for turn-back cuffs cut in one with the sleeve.

Style B has an applied trimming band, i.e. an 'outside facing' which follows the *shaped wrist line*.

Choice of method (A or B) will be influenced by technical considerations, by style details and by fashion.

Style C is a simple shirt sleeve also known as **Bishop sleeve**. This again is just the Straight sleeve block, this time, however, gathered into a cuff at the wrist. The full width of the sleeve (e.g. 35 cm) is gathered into a straight band 19–20 cm (excluding overlap) so that the fullness is about double. For a 4·5–5 cm deep cuff the sleeve length should be reduced by 4 cm on the forearm and by 2·5 cm on the Back Line (see cuff of style F).

Style D is usually known as **Bell-shaped**, and the pattern is obtained by cutting the block along the Back Line from wrist up to B, and opening it 5–8 cm for extra width. The wider type of Bell-shaped sleeve usually needs a slash along the Forearm as well, but always with less added than on the Back Line.

Style E is the same pattern, but used with a cuff, i.e. as a fuller Bishop sleeve. The cuff is tight and narrow and often, to emphasize the pouch, the sleeve length is not reduced.

Style F is another style of Straight sleeve gathered into a cuff, but with three horizontal tucks between wrist and elbow. The main problem here is the correct planning of the tucks, for which 7·5 cm extra length must be provided. Plan the tucks 6–7 cm above the wrist and 6 cm below the Elbow level so that the tucks do not interfere with either wrist gathers or bending of arm at elbow. As the lower part of the sleeve is about 25 cm long, the spacing of the tucks can be arranged over the 10–12 cm in the middle.

First plan and check the tuck lines on the *folded* sleeve (i.e. the *Front view*, which can be *held to the arm* to check details in a mirror). Open it out, rule the lines right across and cut on them. Lay and pin cut pattern on new paper, leaving 2·5 cm spaces for the tucks, which are 1+ cm wide when folded out. Before pinning each pattern section test its position by folding out the extra as a tuck (as explained for adding fullness in Chapter III, FIG. 14).

N.B. Note that all the 'Lines of the Sleeve' are useful reference lines for style planning, also that Front view of the *folded* pattern is often more helpful in suggesting style details at an early stage.

PLATE 19—SHORT SLEEVES

The five styles in this Plate illustrate mainly different ways of **adding width (fullness) and height** when the sleeve is short and can be cut from one end to the other. The Straight block is used in each case.

In style A fullness is *in the lower part only* and the crown is quite plain, i.e. neither full nor raised. After outlining sleeve to 10–11 cm down the Underarm (or as far as the top balance marks), fold it lengthwise in half twice to obtain three creased lines, or use the Back, Top and Forearm Lines. Cut along these from lower edge and lay pattern on another sheet of paper, opening strips to add at least half as much as the original width (e.g. 18–20 cm) or more, according to style and fabric to be used. Divide addition *unequally* between back and front part, opening back strips more. Draw new lower edge, dipping it well below Back Line and in the middle *to emphasize the pouch*. The edge is gathered into a narrow band.

Style B has a raised crown with fullness standing away from, and well above, the shoulder, but with little width below. It is 13–15 cm long on the Underarm.

Slash from the top edge (the reverse of A) and cut right through the middle. Open the side slashes only 3–4 cm, but in the middle *overlap the lower edge* through a point (X) 5–6 cm up, to lose 3 cm: this will open a gap at least twice as wide at the top. Raise the crown 6 cm and re-draw it through this new point.

Measure length B–F of the new (raised) crown and *compare with the basic length B–F* of the sleeve block (average about 21–22 cm) to *establish amount of extra fullness in the crown*. The gathering thread is taken from F to 2 cm *above* B. For a more concentrated effect (fullness higher on the shoulder) gather from 2 cm above F to 4 cm above B (as style C). Note curved shape of lower edge.

Style C has extra fullness at the top and also in the lower part *above a tight lower edge*. The width (5 cm) is added right through the middle, and the lower edge is then tightened by two short, wide tucks (2–3 cm on the double) stitched 4–5 cm up and releasing fullness above. The excess width of sleeve plus the 5 cm extra provide for the tucks. Raise the crown 5 cm, re-draw, measure B–F as usual.

Style D is similar in cut to style C, but with a much bigger addition of width and height. Since the lower edge is gathered into a band, it is not straight, but dips well to emphasize the pouch. (Add 15–16 cm, raise crown 8 cm.)

Style E is a **Cowl sleeve**, and is an example of how extra width can be used for a draped effect. The fit is quite smooth at the top and lower edge: the bulk of the fullness comes *below* the shoulder.

After slashing through the middle, place the two halves at right angles. Complete the lower edge as shown (adding width at the seam if necessary). At the top take a straight line from T to T: on being folded in half (a–b joining b–c) it will bring the two points T together when the sleeve is assembled. The fullness then arranges itself naturally into deep draped folds (as sketch). This sleeve is more often cut on the true bias (see also style F, Plate 20—a shallower 'cowl', cut normally on the straight grain).

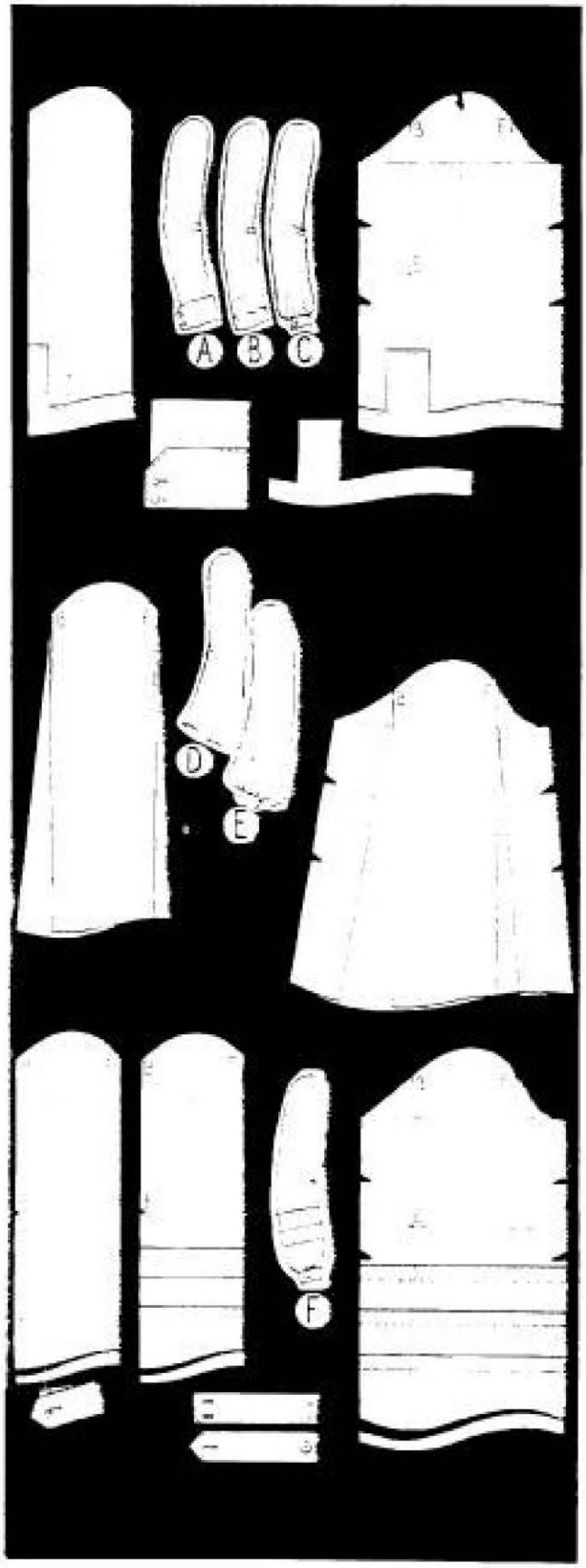


PLATE 18

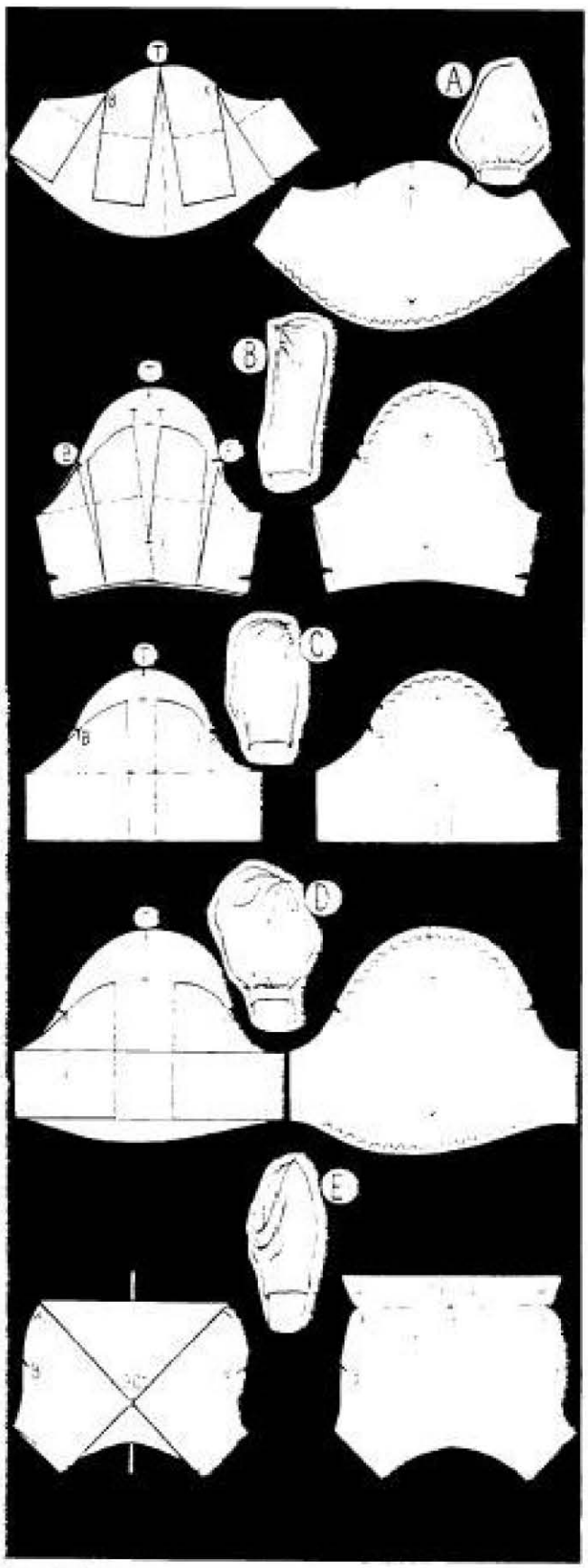


PLATE 19

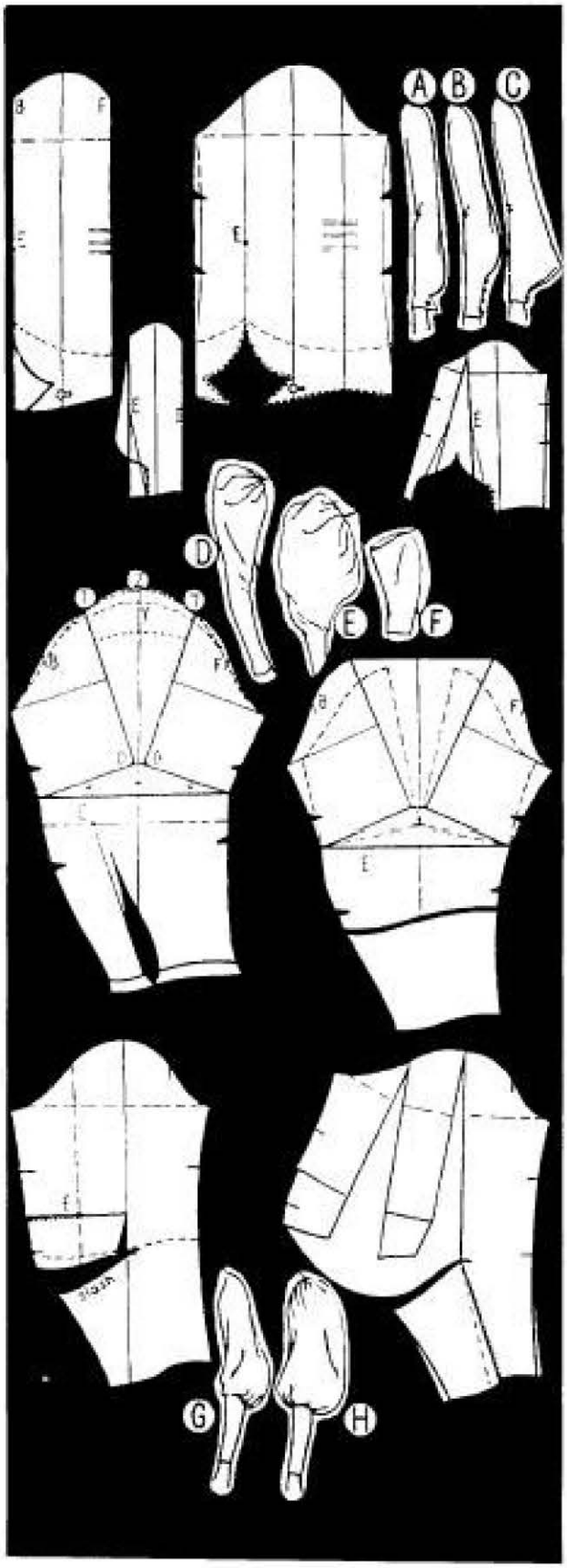


PLATE 20

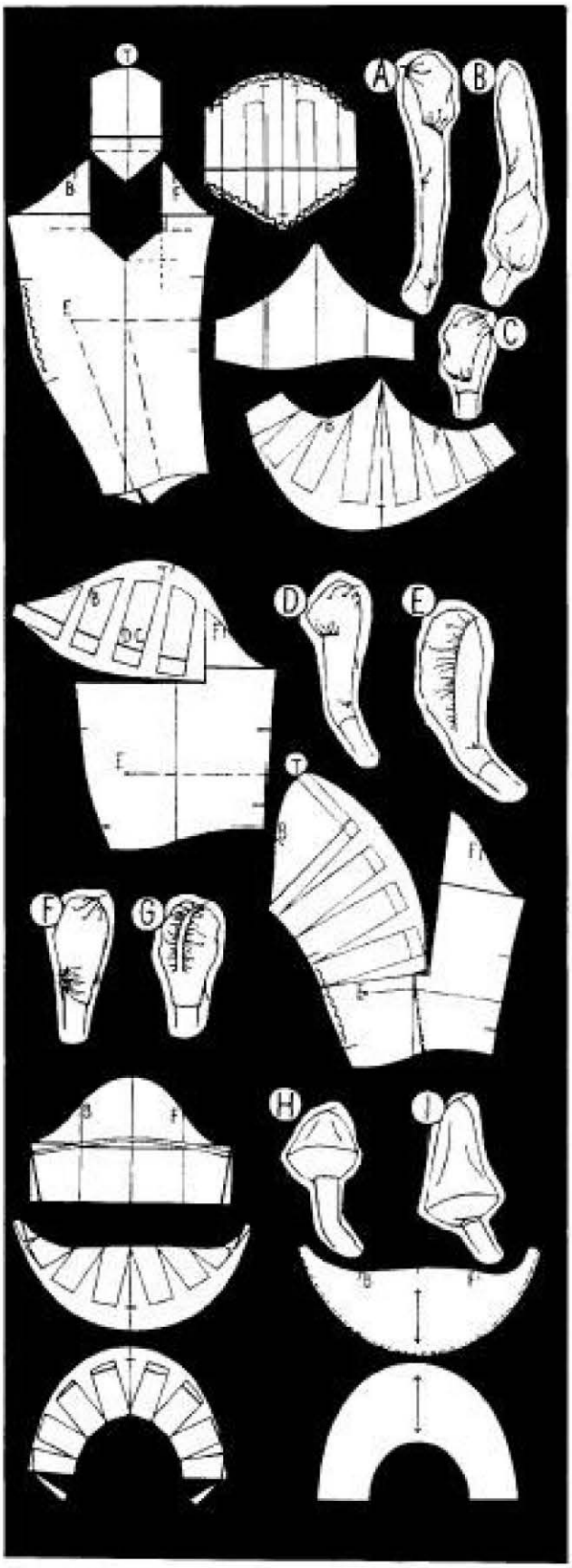


PLATE 21

PLATE 20—SLEEVE SILHOUETTES

In this Plate are shown three basic sleeve silhouettes which are achieved by introducing extra width or fullness in three different positions: above the wrist, at the top and at elbow level. Each basic silhouette is capable of many variations.

In the **first group—styles A, B, C—the width is in the lower part.** This may be just the usual width of a loose straight sleeve, used in some interesting way, or extra width added to the back of the sleeve.

To plan the style use the Straight block in its Front view position, shown in FIG. 1. Outline the wrist part and cut away surplus. FIG. 2 shows final pattern.

For a more 'stand-away' effect slash pattern on Back Line and add width according to style: a small amount for style A, more for B and still more for style C.

In the **second group—D, E, F—the extra width is at the top,** and the method of adding it has already been explained earlier in the chapter. This width can also be used in many different ways. The two typical examples of this cut are the **'Leg o' Mutton' type of sleeve,** with width projecting at or *above* the shoulder; and the **'Cowl' type of sleeve,** with width projecting *below* the shoulder.

For the Leg o' Mutton style (D) slash down the middle of a Semi-shaped or Tight sleeve to the required level, i.e. down to the elbow or to 15 cm below DC Line, as in this example, or higher. Cut across and move the two sections 5–6 cm up the centre guide line. Mark Y, making OY = OT. Draw crown through Y passing below B and F (as FIG. 3, page 73). Measure width of gap added to length B–F. For extra *height* with *little further increase of width*, raise point Y 2–3 cm to Z and re-draw crown through Z.

By slashing to a lower level (e.g. to elbow level) used for a real Leg o' Mutton sleeve (style E), more top fullness is gained with the same 5–6 cm rise at the base, as the slash is *longer*. With only 3 cm rise at the base (or a shorter slash to a higher level) the amount gained at the top will be less (dotted outline). For a cowl example the two sections are moved up and out until the distance between them at the top is suitable for the style (e.g. 25 cm for a medium cowl). The straight line ruled across will fold in half to bring points T together, as in style E, Plate 19 (which has, however, deeper and more set folds than this one). A shorter line across may be used for a different style effect, e.g. a single loop (or 'cornet') as in style F.

The **third silhouette** is achieved by **fullness projecting at elbow level,** over a tight long cuff. In **style G** it is gathered into a slash made half-way across the sleeve. Mark its position aided by guide line (between lower balance marks, parallel to wrist) and dip it towards the back. Cut on it, close Elbow dart transferring into lower edge (as in FIG. 8, page 75). For the width, slash on Top and Back Lines adding 6–8 cm and 9–10 cm respectively. For pouch, dip the lower edge as much as gap will allow (2·5 cm). To increase 'gap' and pouch, take out small (3 cm) dart through the middle of cuff part, compensating on the seam edges for cuff width lost.

Style H has a separate cuff, more fullness and pouch, and may need a lining to keep the cuff up.

PLATE 21—MORE ELABORATE SLEEVE STYLES

The sleeves in this plate illustrate style effects achieved by **using seams and slashes in various positions,** i.e. by *'cutting-up'* the plain sleeve.

The first group shows styles in which a section of the plain sleeve is *cut away* and replaced by one which is fuller and either gathered (puffed), draped or flared; or simply by an inset piece of trimming (e.g. tucking), or of contrasting fabric (e.g. velvet, lace, etc.).

The shape of the inset part is outlined on the block: the Tight or Semi-shaped for **style A,** the Straight for **styles B and C.** It is then removed, divided into strips and either cut right through, as in A and C, or just from one edge, as in B. The amount of fullness added varies with style and fabric.

In Style A the inset piece (13–14 cm wide) is doubled in width and the crown is raised 5 cm. In style B more width is added in the back part than on the Forearm, i.e. the strips are opened out more (total added 18–20 cm).

In **the second group** the special style effect is achieved by slashes or seams placed in various positions, but always running from an outer edge. The parts released are widened, i.e. gathered, puffed, draped, etc.

Style D, a Semi-shaped ¾-length sleeve has a slash 2·5 cm below the DC Line, running 6–8 cm beyond the middle. The detached part of the crown, cut into strips, is spread out for extra width, *more at the lower edge than at the top* (e.g. 4 cm as against 2–3 cm), which makes it curve slightly upwards and increases the slash opening, enabling lower edge to be dipped a little for a pouch. The raised crown (4–5 cm) is added in the usual way.

In **style E** the slash is made down the Top Line or 1–2 cm to the front of it. It comes down to 3 cm above Elbow level. The released back part is slashed across and fanned out 10–12 cm. Extra width is then added *across* (4 cm in widest part) and this 'bulge' further lengthens the line to be gathered into the front part.

Vertical seams (one or more) are often used in this way merely to expand the silhouette of a sleeve, by adding width in an unusual position.

Styles F and G are two more examples of these popular 'draped' slashes. The sketches are self-explanatory.

The third group includes sleeves with a seam which cuts them completely into two separate parts.

Style H, known as **'Lantern sleeve',** can be shorter or longer (11–13 cm on Underarm in this case), standing away more or less round the arm. The dividing line (the seam) runs from 1 cm below DC Line up to 1 cm above it in the middle. Each part is slashed and opened out (total added about 20–23 cm), but less at the ends than at the centre, where extra depth must also be added (2·5–3 cm).

The length of the two outer edges (which come together) must be measured and made to match, altering, if necessary, the lower part to fit the top part. The sleeve usually has a close fit at the lower edge and is often stiffened by a lining or cord inserted into the seam.

CHAPTER NINE

COLLARS

GENERAL PRINCIPLES

In every collar one must distinguish **the Outer edge** and **the Inner or Sewing-on edge.**

The set of a collar, i.e. the way it lies and fits at the neck, depends on the *shape* of the Inner or Sewing-on edge. This, in turn, depends on the *difference in length between the two edges.*

If both the Outer and the Inner edges of a collar correspond in shape and length to its flat outline made on a bodice pattern, the collar will lie perfectly flat. But *if the Outer edge is shortened*, the collar can no longer lie flat and will begin to stand up and roll over at the neck. The bigger the difference between the two edges, the more pronounced is this effect, and the more definite the 'roll' at the neck. Of course only the Outer edge length can be changed: the length of the *Inner edge must remain the same* to fit the neckline, though its *shape* will change and become less curved (FIG. 1).

The principle is best illustrated by reducing the length of the Outer edge of a perfectly flat collar, e.g. of a round Peter Pan collar. The Outer edge can be reduced by darting (FIG. 2), and as the difference between the two edges increases, the collar, which can no longer lie flat, 'rolls' higher and higher at the neck while the shape of its Inner edge, where the 'darts' run off to nothing, changes and gradually approaches a perfectly straight line (FIG. 1—Straight collar—shaded outline).

Further darting of the collar, which is now a straight band, produces the opposite curve on the Inner edge and a very high fit at the neck.

The Sewing-on edge has thus changed in shape from a concave to a convex curve, and the set of the collar has changed with it, passing through various stages from a flat fit to a high fit at the neck.

The 'roll' of collars varies with style and a collar may

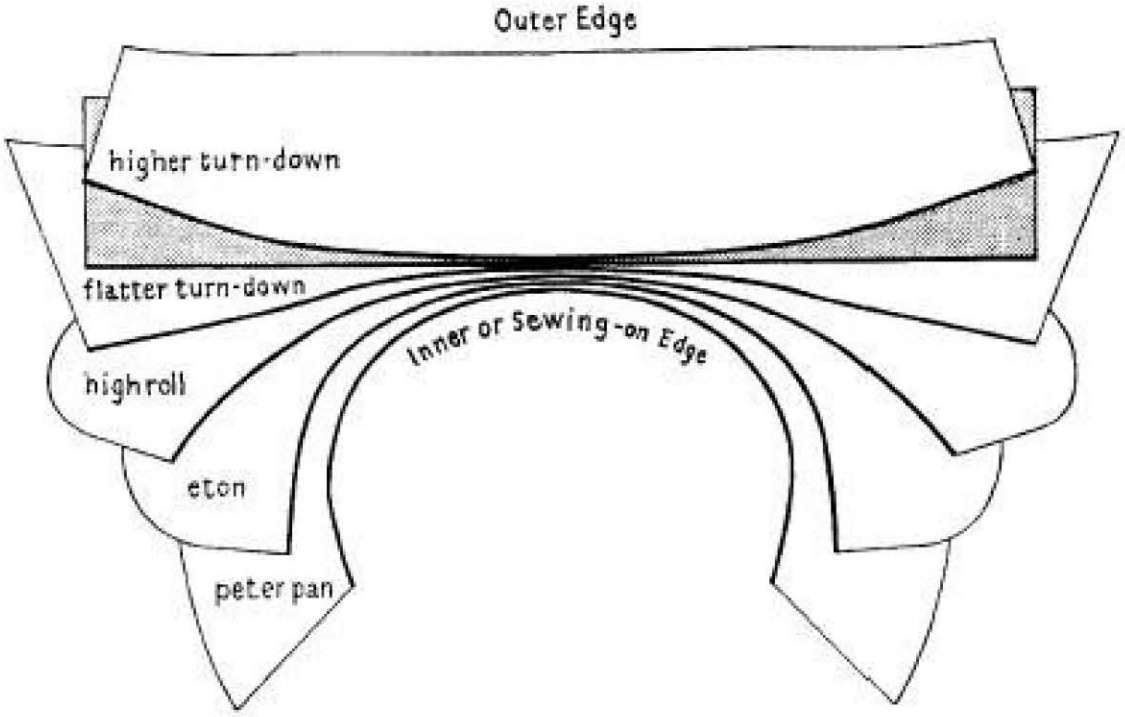


FIG. 1/IX

roll very high in the back, be flatter at the sides and quite flat (no roll) in the front; or it may roll evenly all round. Wherever the collar turns over and rolls, there extra depth is needed for the 'stand' of the collar (otherwise the part which rolls will be too short). This extra depth of collar, even though added at the Outer edge, is an allowance for **the 'stand'** which invariably **forms at the neck** edge as soon as the Outer edge of a flat collar is shortened.

The understanding of this general principle, which underlies the construction and fit of all collars, is of great help in fitting collars and correcting collar patterns: they can be darted, i.e. shortened on the Outer edge if too flat, and slashed and lengthened if too high.

It also provides a method for cutting more elaborate styles of collar *step by step*, outlining them first on the bodice as *flat* collars, and then obtaining the correct fit at the neck by darting or by slashing.

The general principle explained above applies to all shapes of collar and neckline, but one must remember that *every collar must be cut for its own neckline*, and it is useless to try to fit a collar cut for one neckline into another of a different size and shape.

The shape of the neckline affects considerably *the set* of a collar. Some necklines have the effect of tightening the fit of a collar, i.e. of pulling it up higher and making it cling more to the neck. Other necklines, on the contrary, make it fit flatter and looser. A straight band, for instance, will set flatter in an open rever-type of neckline than in an ordinary high shirt blouse neckline. It therefore follows that with a tighter neckline a looser fitting collar should be used, and vice versa.

The shape of a person's neck also affects *the fit* of a collar. For a *stooping* figure with a 'long' neck a collar which is more close fitting at the back is necessary. A thick-set figure with a short, straight neck generally needs a looser-fitting collar.

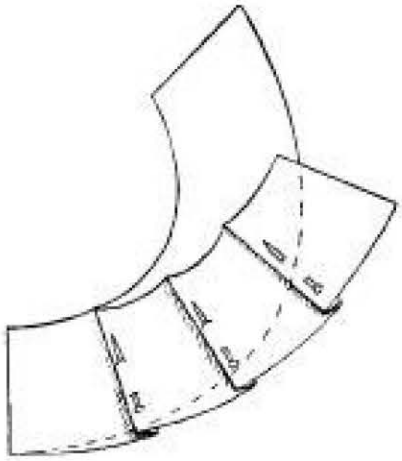


FIG. 2/IX

Finally, it must be borne in mind that individual preference is an important factor in deciding on the shape and cut of a collar. Some people like all their collars to fit well up at the neck, some prefer them looser, while the majority are simply guided by style and by fashion, which exerts a considerable influence on the way collars are worn, and therefore cut and fitted.

From these introductory remarks it will be easily understood that, since every change in the length of the Outer edge alters the set of a collar, this results in a great variety of collar styles, few of which have definite names, and most of which are even difficult to describe. This variety and the difficulty in classifying collars is the cause of many 'collar troubles' and the reason why so many fitters have to rely upon a preliminary fitting of a collar in mull or calico. But although a certain amount of experimenting with the fit of a collar is often necessary, this can be successful only if one knows exactly what to do to the pattern to make it set and fit differently—higher, lower, tighter, looser and so on.

In theory, all collars, whatever their style, may be cut by *outlining them first as flat collars* on the bodice pattern, and then obtaining the correct fit at the neck by darting. But it is clearly absurd to use this method for cutting a collar which is known to be a straight or nearly straight band. In practice, therefore, it is more convenient to cut some collars beginning with a flat outline, some beginning with a straight band, while for a few styles there exist other well-established methods.

Before describing various collars a few words must be said about necklines, particularly the natural or 'basic' neckline of the bodice block into which so many collars are set.

The basic neckline of the block is close fitting and should be equal to the neck measurement. Even when this measurement is not actually taken, it is represented by the fit of the bodice block neckline which must, therefore, be adjusted on the figure to fit right up to the base of the neck.

Nevertheless, when a garment, particularly a long or heavy one, is cut from a perfectly well-adjusted block, it is often found that its weight stretches the neckline, and however accurate the pattern, the neckline increases in size. Some necklines are much less affected than others, and much depends on the fabric used. But generally speaking, some *tightening of neckline is often necessary* at the fitting stage, and is always an essential preliminary to the fitting of high 'stand' collars clinging to the neck.

On the other hand, a loosening of neckline is often quite acceptable (more comfortable in wear) so that a slight stretching may be disregarded, and no attempt need be made to correct it (this applies mainly to high basic necklines). In such cases, however, it is obviously necessary to have the Sewing-on edge of the collar a little longer (0·3–0·5 cm on the ½-pattern) so as to adjust it to a looser neckline.

Apart from such cases, and a few others involving mainly bias cutting, collars are generally cut to fit the neckline. The method of cutting a collar shorter in order to have to stretch it into the neckline (for better fit) is seldom used nowadays except in tailoring.

For high stand collars or other *styles which must fit close to the neck*, the size of the neckline must not be allowed to increase. Therefore, bearing in mind the possibility of stretching, it is advisable to reduce the neckline in the pattern by 'blocking in' (see next chapter). The collar itself should be cut to the usual neckline size.

In spite of the big variety in collar styles, there are certain types which can be recognized as basic. By studying these **basic collar patterns**, grouped according to the method of cutting them, one can learn to deal with many different fancy collar styles.

GROUP 1—FLAT COLLARS (Plate 22)

This group is best represented by the round, so-called **Peter Pan collar**, which lies perfectly flat and has no roll at all. Flat collars, however, can be of *any shape*—square, pointed, etc.

All Flat collars are simply outlined on a bodice pattern joined at the shoulder with NP-s touching (back SP projecting beyond front SP). When using thin paper, this is placed over the pattern and the Inner edge of the collar is outlined according to the *neckline of the style*, whatever its shape (marking CB and CF); the collar is then completed following the design. When using thick paper, the collar should be outlined completely on the pattern of the bodice and then traced through.

GROUP 2—COLLARS WITH A SLIGHT ROLL (Plate 22)

This method is best illustrated by the so-called **Eton collar**, which has a slight roll in the back and on the sides. There are other styles cut in the same way (e.g. Sailor collar), and the making of an Eton collar is often the *first stage* in producing more elaborate collar styles. The overlap may vary a little, but is seldom less than 2·5 cm or more than 5 cm at SP, average 4 cm (see page 82).

Both the Peter Pan and the Eton collars are much used as *basic patterns* for the designing of more fancy collar styles and for various fashion adaptations.

GROUP 3—ROLL COLLARS (Plate 23)

The many different styles belonging to this group all have one thing in common: they all roll more than the Eton collar, and so have a more or less clearly defined **'crease line'**, which divides the collar into **'stand'**—the part near the neck—and **'fall'**—the part which rolls over. Because of this, and also because the 'roll' is often concentrated in one definite part only (e.g. in the back), the method given for the Eton collar cannot be used for them (though in many cases, as already mentioned, it may be the first stage). They are usually cut first as flat collars and then darted to produce the right set and fit at the neck. When completing them and re-drawing for the final pattern *extra depth for the stand* must be added outside the provisional Outer edge.

The addition of this extra depth (or width) to compensate for the loss of width taken up by the stand is made *approximately*, and the figures given in the instructions have been obtained through practical experience. Theoretically, however, the aim is to regain *most* of the original Outer edge length lost in darting (it is not advisable to regain the whole of it, as a tighter collar edge is an advantage). Systematic calculation of this loss is possible, but does not seem to be justified in practice, because a collar pattern is usually checked on the stand or figure, and so can easily be adjusted in shape and size.

The two collars illustrating this method best are the one rolling high in the back but setting flat in the front (Plate 23) and the one rolling equally high all round. The first shows the planning of the darts in one part only (the back), the second—the equal planning of darts all round. To allow for loss of width by rolling in the second case, a wider Peter Pan collar than necessary is used.

GROUP 4—TURN-DOWN COLLARS (Shirt collars—Plate 24)

These collars stand up and cling to the neck more than the Roll collars, and they turn down over a sharp, well-defined 'crease line'. They are used mainly in shirt blouses and dresses (or simple jackets), and both in high buttoned-up necklines and open-rever necklines. There are several varieties, but **the basic pattern of all is a straight band.**

GROUP 5—STAND COLLARS (Chinese collar, etc.—Plate 24)

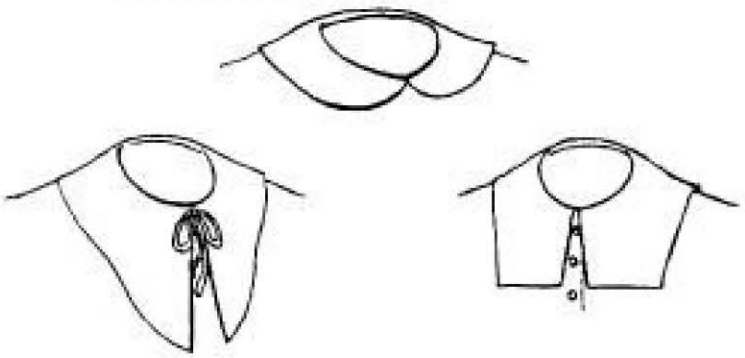
Some of these collars *stand up straight*, some cling more to the neck, while others *stand away* from it. The cut varies according to the effect desired, but the patterns are all similar to those already described.

The most usual Stand collar is a straight band—2·5 cm or wider, average 3–4 cm, normally made to cling to the neck by darting (i.e. shortening) the upper or Outer edge.

If the collar must *stand away* from the neck (e.g. the Medici or Elizabethan type of collar), then the Outer edge must, on the contrary, be *lengthened* by slashing, and the collar then gradually assumes the shape of one of the Roll collars described above.

GROUP I

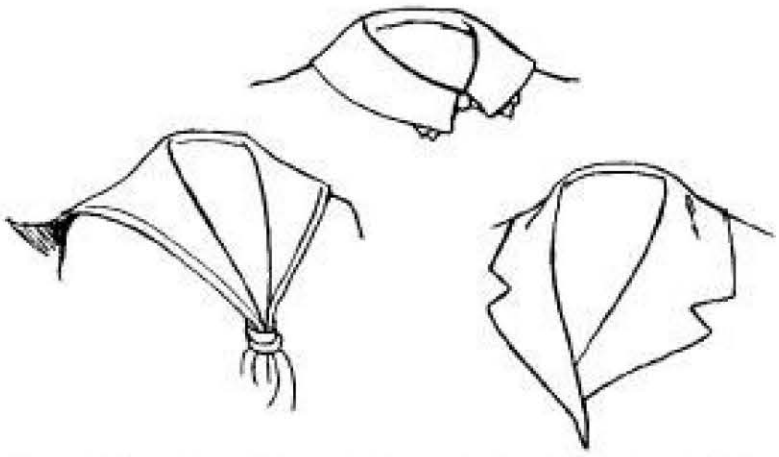
FLAT COLLARS



Various styles based on the Flat Collar—pointed, round and square.

GROUP II

SLIGHT ROLL COLLARS



Several styles with a slight roll, the cut of which is based on the Eton Collar. One of the styles is a Sailor Collar, which can be cut with more or less roll.

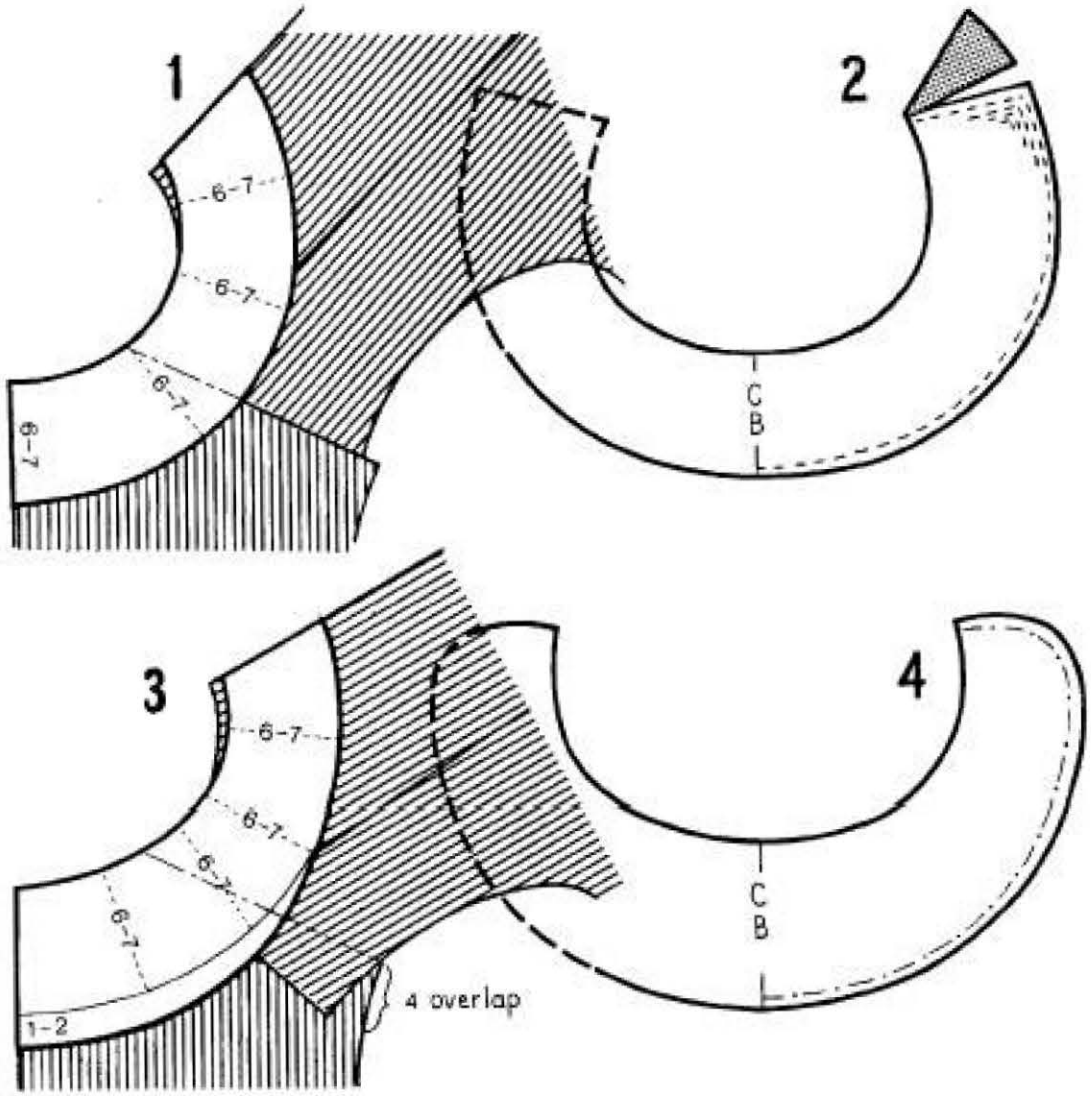


PLATE 22—GROUPS 1 and 2

FLAT COLLAR (Peter Pan)—FIGS. 1 and 2

Join bodice at shoulder, NP-s touching. Outline the Sewing-on edge of collar following the neckline, but modifying it a little by lowering CF 0·5 cm (to tighten Outer edge of collar) and by filling out by the NP-s, where a sudden 'dip' must be avoided. The line is a smooth, even curve, kept rather flat in the back so as not to get a 'point' on CB of collar. (Add 0·3–0·5 cm extra length beyond CF, if this is considered necessary.)

From this Inner line measure width of collar (e.g. 6–7 cm) in several places—at CB, near CF, shoulder, etc. Draw Outer edge through these points, completing front according to style, i.e. round, pointed or sloping away from CF.

COLLAR WITH SLIGHT ROLL (Eton Collar)—FIGS. 3 and 4

Join bodice at shoulder, NP-s touching and *shoulder seam overlapping* 4 cm at the armhole. Outline the Inner edge as described above for the Flat collar and measure the width evenly all round, as for the Peter Pan. Then add 1·5–2 cm extra depth on CB and from here re-draw the Outer edge, running the line gradually into the original outline beyond the shoulder seam.

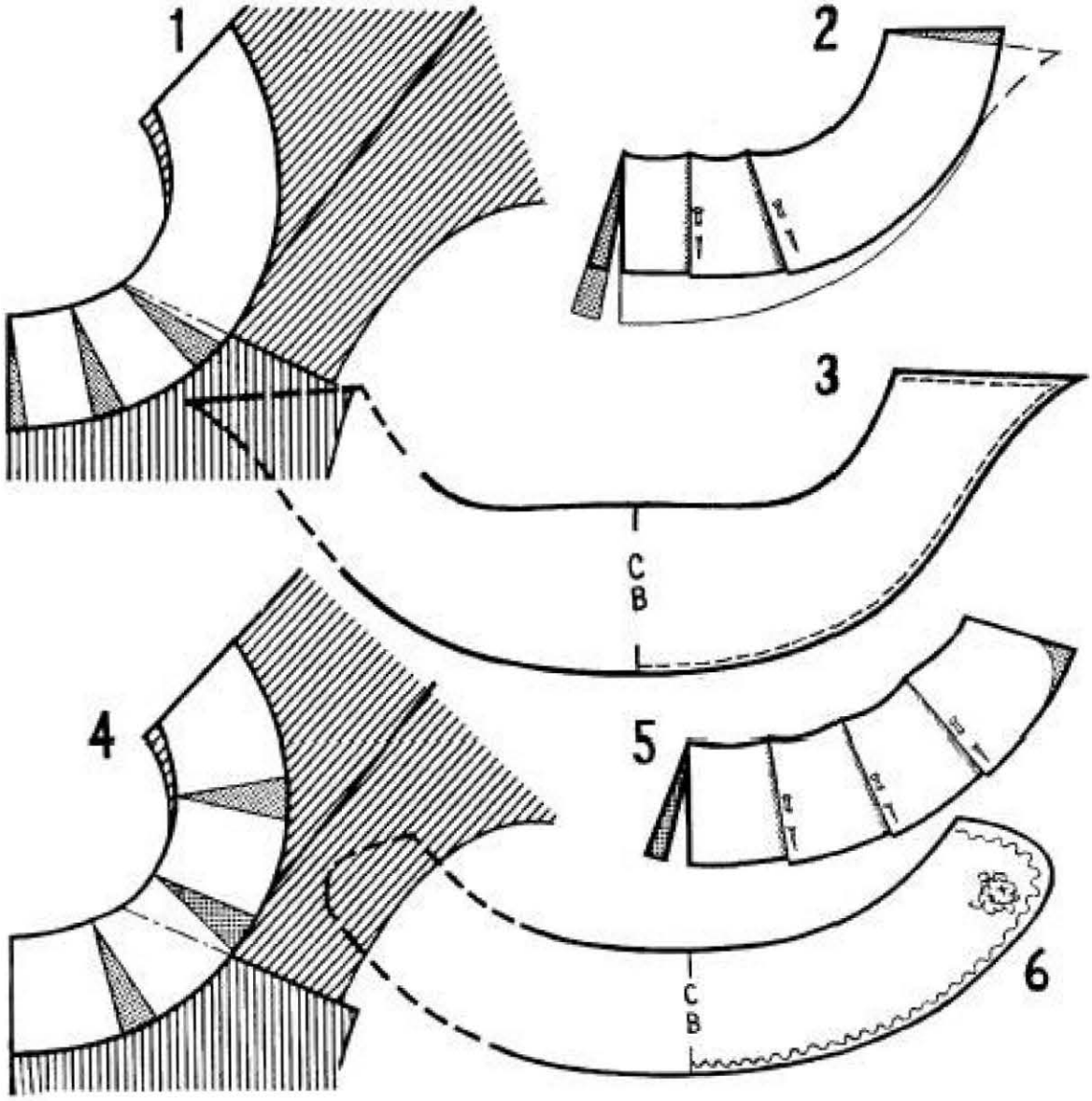


PLATE 23

PLATE 23—GROUP 3

ROLL COLLAR (high back, flat front)—FIGS. 1, 2, 3

Outline a Flat collar and cut it out. In the back mark position of two darts (first indicating the centre guide lines). One dart should be near the shoulder seam, and the other half-way between the shoulder and the CB. On each line take out a 2 cm dart. Close darts and paste them. For higher fit 0·5 cm may be cut off the CB, taking care to avoid 'point' at neckline.

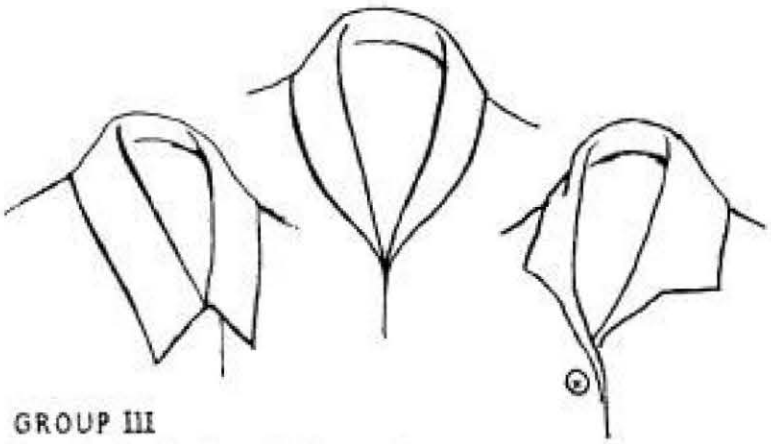
Re-draw collar, adding extra depth for stand (usually 2–3 cm) down the CB. Complete according to style.

ROLL COLLAR (rolling high all round)—FIGS. 4, 5, 6

Outline and cut out a Flat collar. Fold in half and again in half to mark three creases as guide lines for darts. Take out a 2 cm dart on each line. To improve roll in the front (where the collar tends to flatten out near the CF opening) lower the Inner edge another 0·5 cm (compensating on the Outer edge), or use a small additional dart near CF.

No extra depth need be added, because the collar rolls *evenly all round* and will simply appear narrower, e.g. 4·5–5 cm instead of 6 cm wide. The original width must include the stand.

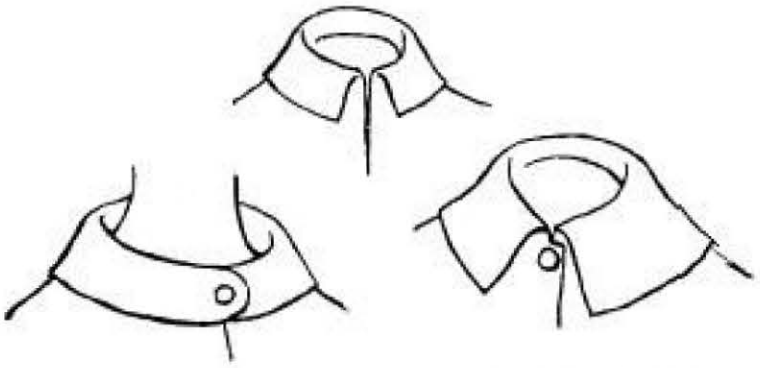
ROLL COLLARS



GROUP III

Several styles of collar which have quite a high roll in the back and some roll at the sides, but flatten out towards the front.

ROLL COLLARS



Styles of collar with a fairly high roll all round. Since a front opening generally tends to flatten a collar, some of these patterns should have an additional or simply deeper dart in the front in order to ensure a higher front roll.

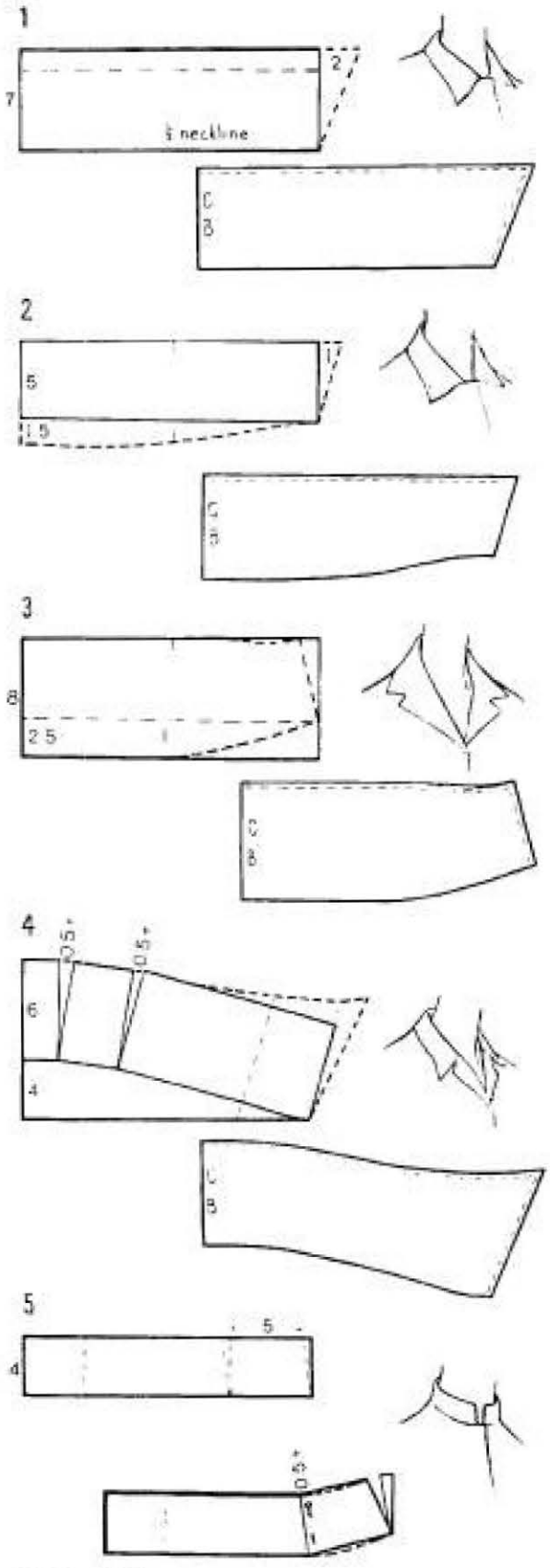


PLATE 24

PLATE 24—GROUPS 4 and 5
TURN DOWN COLLARS

Style 1: Straight band used as it is. Suitable both for open and high buttoned-up necklines. The pattern, a rectangle 5–8 cm wide, according to style and fashion, is cut to half-neckline measurement.

Style 2: Straight band with 1·5 cm stand added to the Sewing-on edge. This is a tighter-fitting collar, used mainly for high-neckline shirt blouses. The extra depth is added at the CB, the curving line running off to nothing at CF. The finish at the ends is optional, according to style and fashion—straight, pointed, cut-off, etc.

Style 3: Straight band with a 2·5 cm stand added. This is a still tighter-fitting collar, suitable mainly for the looser, open-rever neckline. The stand addition is made by a different method than in example 2; the methods are, however, interchangeable.

The rectangle is wide enough *to allow for the* 2·5 *cm stand* addition and is then reduced at the ends to the required width of the collar (e.g. 8 cm wide rectangle is reduced to a 5·5 cm wide collar in the front). The Sewing-on edge, therefore, curves up more steeply and is thus longer than in collar 2.

The collar is sometimes used as a simple 'tailored collar'.

Style 4: Straight band lengthened on the Outer edge (in the collars above it was *shortened* through the Inner edge being lengthened by curving). The straight band is slashed from the Outer edge and 0·5 cm is added twice to make the Outer edge 1+ cm longer. This makes the collar roll away a little from the neck, i.e. the effect and the fit is less clinging.

A variation of this collar (with a small dart taken out in the front part to tighten it here—see broken line—FIG. 4) is used as a '*tailored collar*' in modern pattern designing.

STAND COLLARS (Chinese collar, etc.)

Style 5: Straight band used as a Stand collar. The band (3–4 cm wide) can be used as it is, but for more clinging fit at the neck it is usual to take out a small dart in the front part and, in some cases, for people with long sloping necks, also one in the back part (broken line—FIG. 5). The collar becomes curved, with a tighter Upper (Outer) edge. The front ends are usually trimmed 0·5 cm on the Outer edge to prevent overlapping on CF.

BIAS CUT COLLARS (Crossway collars)

These collars are straight bands of material *cut on the 'true bias'* and *folded double lengthwise*. They fit into a variety of necklines with different effect. There are, therefore, many styles belonging to this group which may even replace some of the collar patterns described above by giving a similar effect (the bias shirt-blouse collar or the small round 'High Roll' collar are two examples).

The most typical style of bias collar is the long Roll collar tapering off to a point at the end, set into a V-neckline. Wider bias bands (folded double) are also used for other shapes (e.g. Boat-shaped collar) and for a variety of draped collars.

It is usual to cut bias collars to the neckline measurement, without a pattern and, more often than not, with an addition of length of 3–5–8 cm for easing which gives the collar a flatter fit (e.g. for a long Roll collar—3 cm extra, for a Boat-shaped collar—7–8 cm extra).

Bias collars tend to have a high roll (often so high that even the seam shows under the Outer edge), and this flattening by the easing of the Sewing-on edge is most important. In the long Roll collar it is done mainly in the back; in the Boat-shaped collar—mainly on the shoulders.

Generally speaking, the set and fit of these collars depends on their *extra* length (i.e. the amount allowed for easing) and still more on the shape of the neckline.

The width of the band used for a bias collar must be double the required width of the collar plus the turnings (it is advisable that the total width allowed should be a generous one, as such collars tend to look narrower than expected when folded over). In fact, it is better to cut most of these collars with the *fabric already folded double on the true bias*, and not to open out the fold until the collar is set on (FIG. 3).

In all cases bias collars, though not difficult to cut, require careful handling and setting into the neckline.

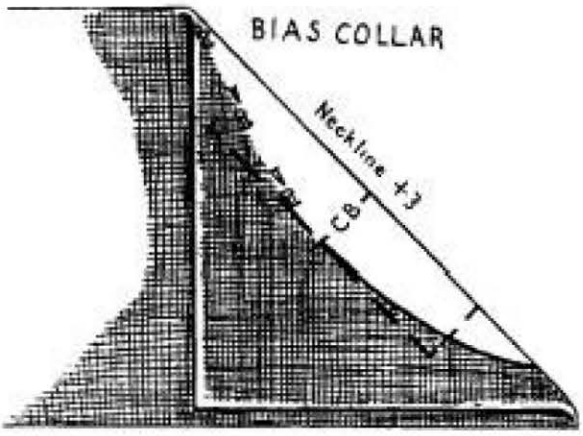


FIG. 3/IX

CHAPTER TEN | NECKLINES, REVERS, REVER-COLLARS, CAPES

NECKLINES

Simple necklines of standard shape—round, square, V-shaped, Boat-shaped, oval—present little difficulty in cutting *if the basic neckline of the bodice block fits well*, i.e. close to the neck. As explained in Chapter II, a deep Shoulder dart eliminates from the basic neckline all extra ease which might affect the fit of a cut-away neckline by loosening its edge (e.g. the gaping square neckline). It tightens the neckline.

The only precaution to be taken concerns the cutting of **very deep necklines**, which tend to fall away from the sides of the neck, and **very wide necklines**, which may slip off the shoulders. In the first case it is a good plan to move the NP-s closer to the neck before drawing the neckline through them. In the second case the neckline may be planned on the pattern and outlined on the material following the design exactly, but should not be cut out to its full depth and width until the garment has been seen on the figure or stand, when its *pull* on the neckline, i.e. the amount of stretching, can be judged and the neckline, if necessary, rectified accordingly.

It is not usual, for instance, in the case of a very wide neckline, to cut it out as far as SP or beyond it, but to leave at least 3 cm of the shoulder to allow for final adjustment later. In addition, it is also advisable as an extra precaution, and whenever convenient, to increase the depth of the Bust dart (by 50%) for very cut-away necklines (or strapless bodices) in order to tighten their edge even more than does the normal Shoulder dart (see Chapter III, sec. 6, FIG. 11).

Cut-away necklines may also be used with collars, when it is fashionable for collars *not* to fit up to the neck.

TIGHTENING THE BASIC NECKLINE

The tightening of the basic neckline becomes necessary mainly when close fitting necklines are fashionable. The tightening or blocking-in is done by drawing another, smaller neckline *inside it*.

Such tightening would also be done to prepare a neckline for a close-fitting style of collar, such as the Chinese (or Mandarin) collar, as was already mentioned in the preceding chapter. The blocking-in of the basic neckline is therefore a frequent preliminary step to the cutting of a collar.

Extend shoulder line a little towards the neck and add 1 cm beyond NP, 0·6 cm above the CB point but nothing above the CF. Draw tighter neckline through these points down to the original line in the front (FIG. 1).

If the neckline is high fitting but without a collar and with a slit opening down CF, it is usual to add also 0·6 cm above CF as well as 0·6 cm beyond the CF to prevent the gaping of the front opening (FIG. 2).

BUILT-UP NECKLINES (Raised Necklines)

Built-up necklines appear on patterns as **extensions above the basic neckline**. They may be quite small, only slightly raised above the base of the neck (Raised necklines); or they may be quite high and form real *collars cut in one with the bodice*.

There are many different styles of Built-up neckline: some go up to a height of 5–6 cm all round the neck and look like Stand collars (the more difficult and less-used variety); others are built up only in the back and at the sides, continuing into an open V-shaped or slit neckline in the front (or vice versa, in the back); while some are but small extensions in the shape of points, scallops or simple folds above the front or back of the usual neckline.

The main problem in cutting these necklines is to get **sufficient width for the top edge** of the built-up collar part without increasing unduly the width *at the base of the neck*. Moreover, this width or ease must be obtained in the

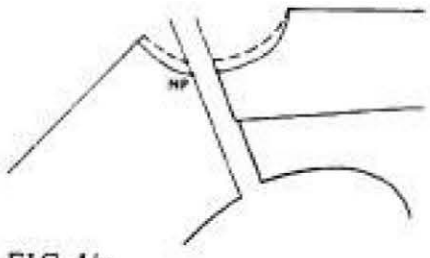


FIG. 1/x

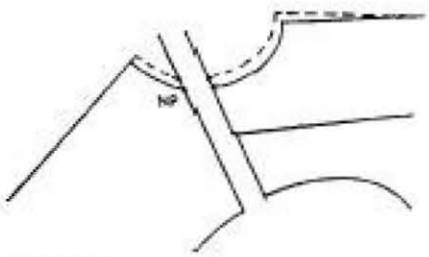


FIG. 2/x

right place, where it is most needed, i.e. in the front part of the neckline. At the sides, above the shoulder seams, it may often be excessive and need reducing for a closer fit.

When there are several seams running from the bodice into the neckline, e.g. shoulder seams as well as CF and CB seams, and the collar part is thus *cut in sections*, there is little difficulty, as each section can be widened towards the top without increasing the width at the base of the neck. But when there are only the two shoulder seams to provide all the shaping of the collar part, it is necessary to find other means of correcting the tightness of the top front edge. The usual method is to transfer into the front neckline some **extra width from the Shoulder dart**. Since a deep Shoulder dart, as already explained, eliminates all extra ease from the front neckline, leaving it quite close fitting, it is always possible to put some of this ease back again into the neckline, whenever this appears to be necessary.

For most of these styles the front neckline is widened by transferring into it part of the Shoulder dart (1+ cm or more). This can be done either as a preliminary step or, more conveniently, after constructing the raised neckline, when the width lacking can be established by measuring the top edge and *comparing it with the original width of the basic neckline*. It is therefore useful to know the original neckline width (e.g. in 92 bodice size the back neckline is 7·5, the front, 11 cm). For a built-up neckline to be comfortable in wear it must obviously be as near to this measurement as possible (though it may be a little less).

The amount of extra width added depends not only on the shape of the neckline, but also on the details of the neckline style. Necklines which are not high nor continuous all round need less additional width and sometimes none at all (e.g. raised neckline open in the front). Those which are high all round and without a break need not only extra width but sometimes also manipulation during the making-up stage (stretching and shrinking) to improve their shape and fit.

The Slanted CF, when used, automatically adds 0·5 cm or more to the built-up neckline, and this happens in the right place, i.e. where it is most needed. The Slanted CB has the same effect of easing the back neckline. However, since in many cases the neck, instead of being straight, tends to be inclined forward, the easing of the back top edge is of less importance and can sometimes be disregarded without spoiling the fit of the built-up neckline.

It is often necessary, while loosening the front of a built-up neckline, to tighten it at the sides, where it easily becomes too loose and stands away from the neck. This is done by bringing the NP a little closer to the neck, i.e. blocking in the neckline at the side only, and also by adjusting the shoulder line extension (built-up part) of the front to a flatter curve, in order to lose some width where it is usually not wanted.

All styles with **built-up necklines**, even those with only a slightly raised one, **must be cut with a Centre shoulder seam** (0·5+ cm at NP and 1+ at SP being *added* to the back shoulder and taken off the front shoulder).

The two examples given below illustrate the general method of building up or raising necklines. One is a style where no extra front width is necessary because the front neckline is *cut away* into a V-shaped or a slit opening. The other style needs a considerable addition to the front. Many other styles would come between the two.

BUILT-UP NECKLINE WITH OPEN FRONT (V-shaped or slit)

The bodice must have a Centre shoulder seam. Use a Slanted CB (more usual in present-day styles) and an ordinary CF. This, of course, will vary according to style and fashion and is merely taken for the present example.

In the back (FIG. 3) extend CB upwards and extend the shoulder line beyond NP to block in the neckline at the side, since it has been widened elsewhere by the use of the Slanted CB (when Slanted CB is not used, this blocking-in is unnecessary).

On the shoulder mark point *a* 0·6 cm inside NP and *b* 1 cm beyond NP (for tighter neckline). From *b* draw up a short construction line parallel to Slanted CB extension, and on it measure from *b* the height of the raised collar part (4 cm). Draw the curving line of the built-up part from *a* up to the line *bc*, curving it well in the angle for closer fit to the neck. Through point *c* square a provisional line to the extended CB, and drop it 0·5 cm at CB to complete the top edge of built-up part.

If the ordinary, not Slanted CB is used for the style there is no need to tighten neck at the side, and the construction line *b–c* is drawn from the actual NP.

In the front (FIG. 4) mark point *a* 0·6 cm inside NP and extend the shoulder line towards the neck. On this extension measure from *a* a length equal to *a–c* in the back—point *b*, and raise it 1 cm along a line at right angles to shoulder extension—mark *c*. From here draw the final, slightly curving line *a–c*, which must be equal to *a–c* in the back, as they are to be sewn together (FIG. 5). Complete the front edge to a V-shaped or slit opening.

No additional width is needed for the front of this neckline because it is cut away and *the opening provides all the ease necessary*. A little stretching of the edge (where it is on the bias) may improve the fit, particularly with the slit opening (broken line, FIG. 4). The latter, in some styles, may need additional ease to prevent fronts gaping (added as in the next example).

BUILT-UP NECKLINE HIGH ALL ROUND—FIGS. 6 and 7

This neckline is not cut away anywhere and forms a continuous Stand collar, in one with the bodice. The back is cut as in the first example, 4–5 cm high. In the front ex-

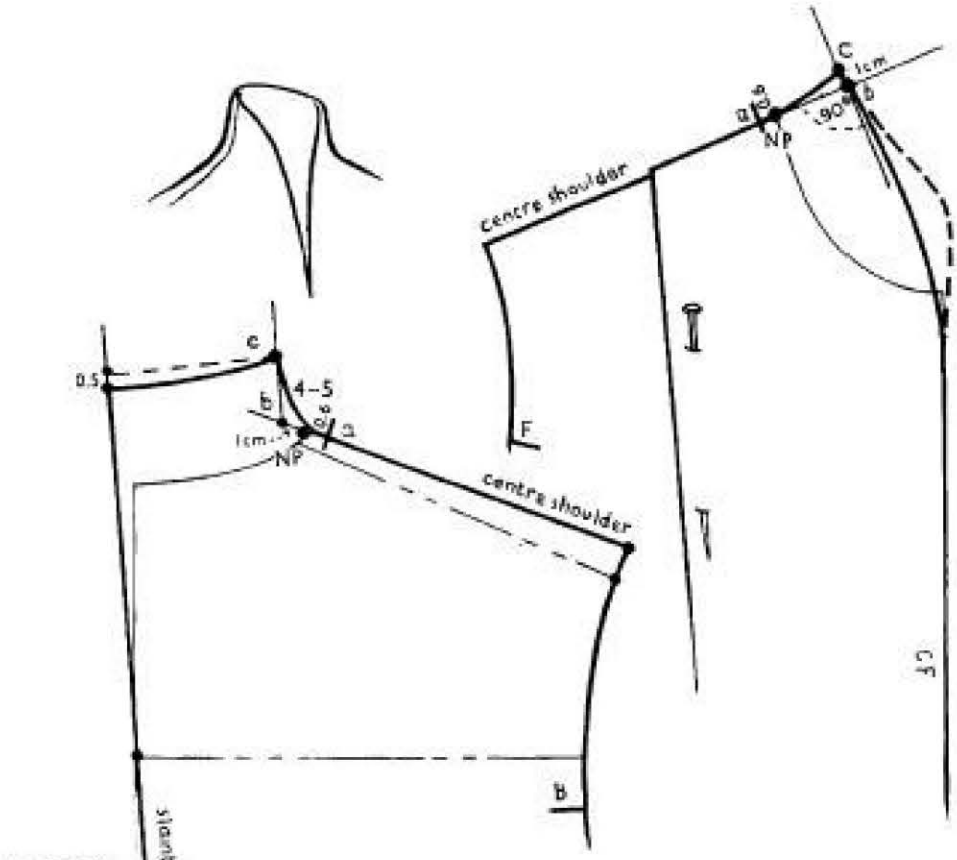


FIG. 4/x

FIG. 3/x

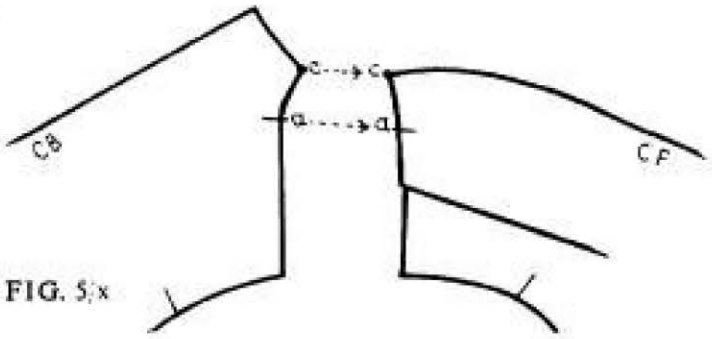


FIG. 5/x

tend shoulder line only a little towards neck. Mark point *a* 0·6 cm inside NP and *b* 1 cm beyond NP (this tightening of neck may be omitted with the use of the ordinary CF, but is essential with Slanted CF). From *b* draw up a short construction line and on it measure height of collar 4–5 cm. Mark point *c*. Complete *provisional* top edge from *c* to CF, which is extended 4–5 cm up. This gives *enough width* on the top edge, but the *width is badly distributed*: there is too much at the side.

To remedy this, move point *c* 2·5 cm along provisional top edge and through this point draw a new shoulder line extension, making it equal to *a–c*. Re-draw the top edge from *new* point *c*: it is now shorter (by approx. 2·5 cm). It must therefore be widened by slashing from the top edge (3–4 cm from CF) down to the point of the Shoulder dart and by closing the latter sufficiently to open a gap of 2·5 cm at the top. Secure the gap by pasting paper underneath and re-draw the top edge across the gap. This operation is known as **transferring part of the Shoulder dart into the neckline.** This is done to loosen it and so achieve more width for the *top edge* of a *close-fitting* raised neckline (the extra fullness it gives at the *base* of the neck is not wanted, but cannot be avoided and must be dealt with by manipulation).

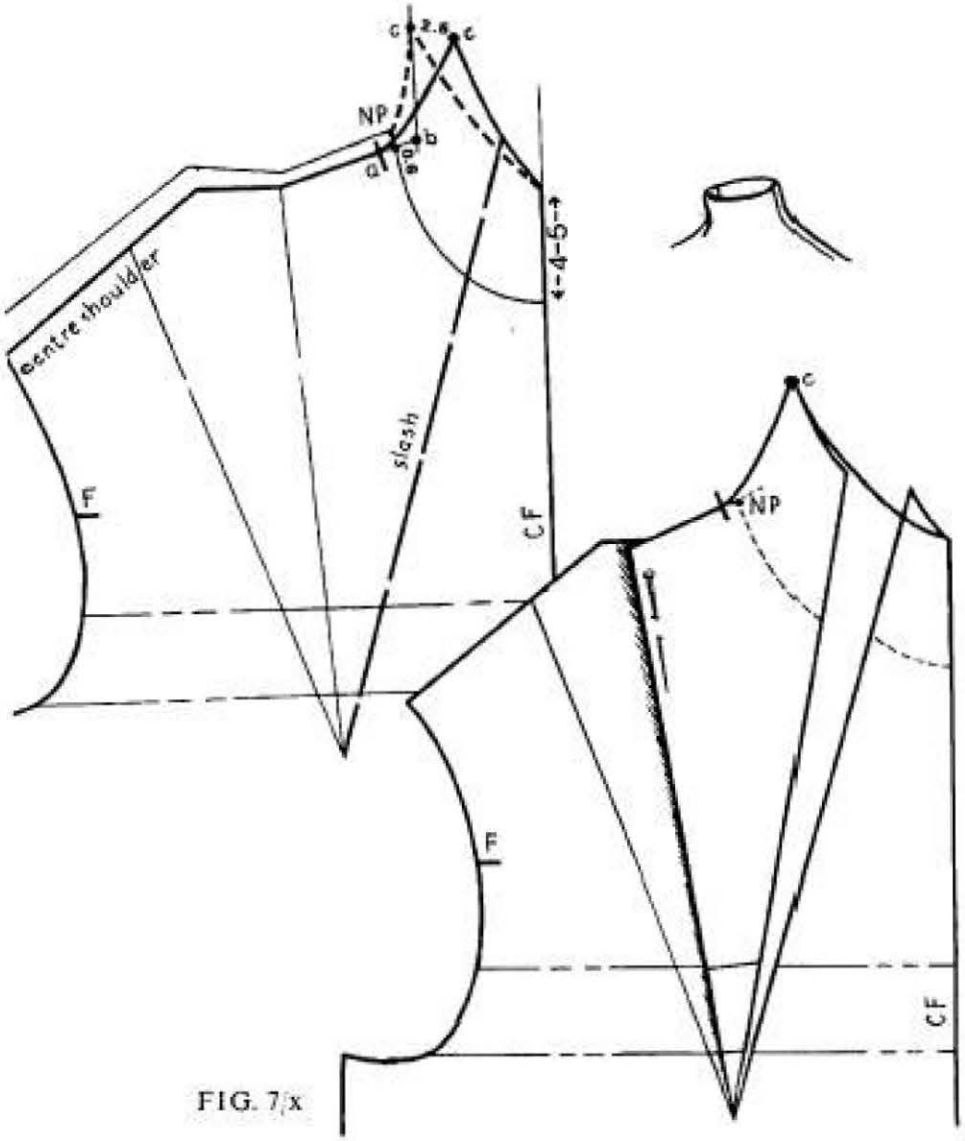


FIG. 6/x

FIG. 7/x

In styles where the top edge does not cling to the neck (e.g. *cut-away* 'turtle necks') such easing is unnecessary and merely produces unwanted looseness and sagging which spoils the shape of the raised neckline.

REVERS

Revers (or lapels) are the front edges of a bodice, blouse, jacket or coat which, in their upper part, fold back over a line known as the **'crease line'**. They appear in a variety of shapes and sizes and in styles both with and without collars.

Two points fix and control the 'crease line' of a rever: at the top it passes through NP; at the lower end it comes down to the 'break', i.e. the point on the wrap edge where the rever begins to fold over, and which is usually just *above the top button*.

The NP may be in its normal position, or be slightly raised for a closer and tighter fit at the neck or, on the contrary, it may be marked lower down the shoulder for an open, cut-away neckline effect. There is little difficulty in establishing its exact position if one follows the style sketch and, to a certain extent, the prevailing trend in fashion.

The *top button* is a *guide for locating the 'break'*, and this varies with style and is also influenced by fashion. In fact, a low or high rolling rever is often a characteristic fashion feature.

The general method of cutting these patterns is first to draw the crease line in its correct position. The rever is then outlined *inside* this crease line, i.e. *on the bodice*, exactly as it appears in the style sketch (FIG. 8). It is then traced off, cut out (FIG. 9), *reversed* and fixed (by pasting) to *the other side* of the crease line, matching balance

FIG. 8/x

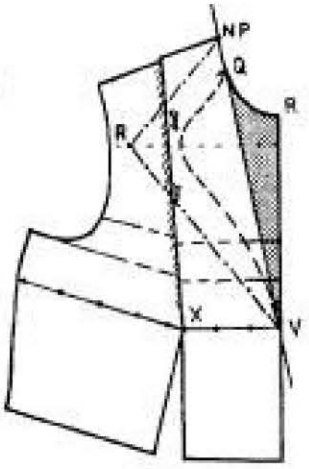


FIG. 9/x

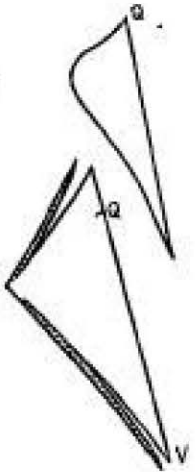
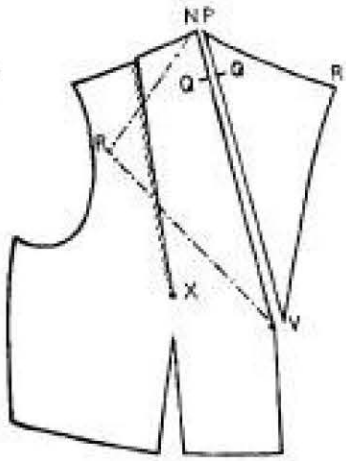


FIG. 10/x



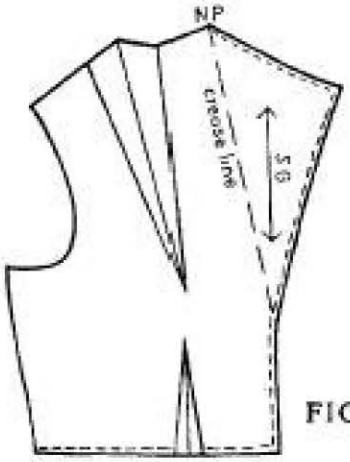


FIG. 11/x

marks (a useful one is point Q at the intersection of the crease line and neckline). The pattern can then be redrawn on new paper.

Two styles illustrate this general method: an edge-to-edge bolero without wrap or collar (FIGS. 8, 9, 10 and 11), and a simple shirt blouse or bodice with wrap and collar (FIGS. 12, 13, 14).

The collarless bolero has a large rever starting high up on the shoulder (which would have been impossible had there been a collar). The crease line is ruled from the ordinary NP down to the level of the True Bust Line, which is more than half-way down the CF (FIG. 8). When fashionable, the NP may be raised 1–2 cm, which would require also a correspondingly raised neckline in the back; or, on the contrary, it may be lowered, i.e. moved 2–4 cm down the shoulder. In each case the crease line would pass through it.

After closing the Shoulder dart, draw the shape of the rever *inside the crease line*, following the style. Note method of establishing point R—the height and width of the rever point—with the help of a guide line, the level of which is found down the CF (FIG. 8).

Make a tracing of the outline NP–Q–V–R–NP, cut it out (FIG. 9), reverse and paste to the other side of the crease line, with NP–Q–V matching (FIG. 10).

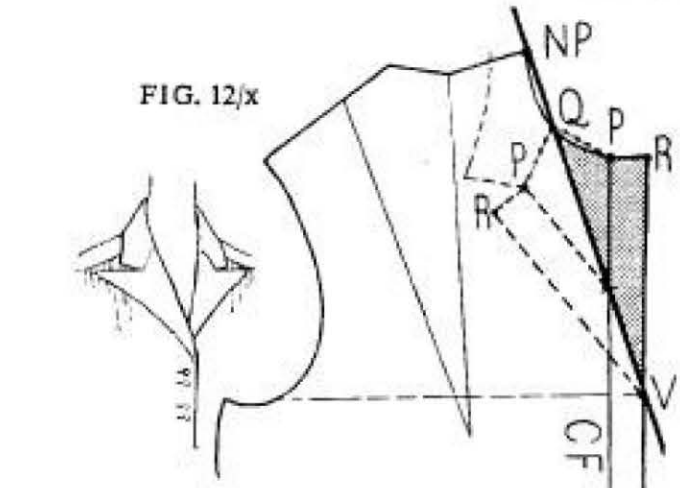
In this style the Shoulder dart should be returned to its original position (whether it had been moved to a temporary underarm position or simply closed), as the style does not suggest a loose hem in which the Dart might have been incorporated. An Underarm dart is not always successful in a bolero with open fronts.

Another possible shape of rever is indicated by the broken line: it starts from point Q, i.e. from the neckline and not the shoulder.

The style with the collar could be a classical shirt blouse or a simple dress bodice of the same type, with the usual shirt collar, buttons down the CF, and therefore a wrap. The rever, which may be either a simple one (basic rever) or a more fancy pointed style, joins the collar along the usual neckline Q–P. The top edge of the rever is thus much lower than in the first example.

The crease line is drawn from the usual NP down to point V—the break—which is on the edge of a 2·5 cm wrap (not on the CF) at Bust Line level, where the *first button* (i.e. the top button controlling the break) would be placed.

FIG. 12/x



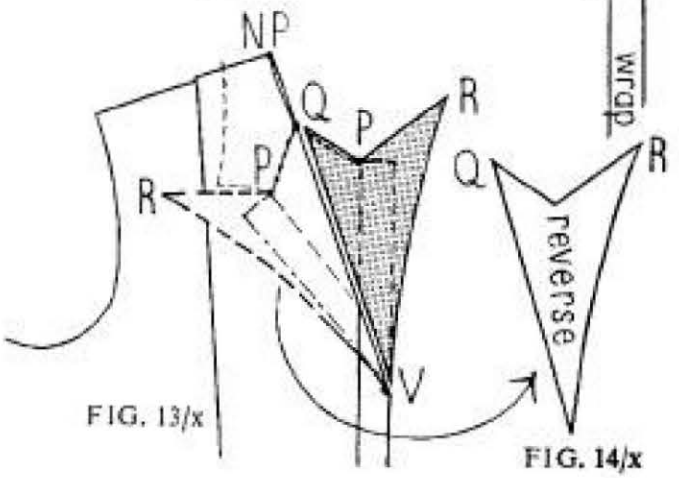


FIG. 13/x

FIG. 14/x

Before outlining the fancy rever, fold under the part *outside the crease line* Q–P–R–V–Q, to get it out of the way, but from the back trace its outline through on to the bodice. This outline is the **'basic rever'**, which includes the 2·5 cm wrap. Appearing in its correct position *inside* the crease line, it can serve as a useful guide for planning more elaborate revers, such as the very pointed style indicated in FIG. 13. The latter is simply *drawn around it* after the position of point R has been established.

The basic rever is often used, as it is, in shirt styles, but, being simple, it does not have to be cut by the standard method explained here: it is just folded back.

For a more elaborate style, outline the shape of the fancy rever (after closing Shoulder dart) *around the basic rever* running into it in the lower part. The line P–Q, where collar joins rever along neckline, is also retained.

Proceed as before, tracing through the shape of the new rever, cutting it out, reversing and joining outside the crease line, points Q and V matching.

Complete pattern as required by style. The collar which would be used with this type of rever neckline is the shirt collar with the 2·5 cm stand.

REVER-COLLARS

A Rever-Collar is **a collar cut in one with the fronts**, i.e. with the revers of a bodice, and it is therefore *sewn to the neckline in the back only*. It is always covered by a facing cut to the same shape.

In style these collars may vary from simple V-shaped roll collars (or Shawl collars) to quite elaborate ones, setting and rolling at the neck in many different ways, and often *imitating* well-known styles, such as a Tailored collar or Storm collar.

It is often difficult to tell from a sketch whether a collar belongs to this type or whether it is cut in the usual way. A CB seam on the collar usually points to the fact that it is not a separate one, but that it forms part of the revers, which continue above the shoulders and round the neck until they meet on the CB in a seam.

It must be noted that, fashion influence apart, it is frequently left to the cutter's judgement to decide whether a collar is to be cut like this or separately, the general appearance, if not the actual fit, being so much alike. Technical considerations, such as the wish to avoid a clumsy neckline seam in a narrow collar, and particularly to be able to button a collar higher or lower, without showing a seam, may be the deciding factor in favour of a rever-collar. On the other hand, one would choose an ordinary separate collar (e.g. a bias fold collar) if one wanted to avoid a CB seam or a seam on the outer edge of the collar, or if it were easier to get a separate collar out of the material available.

There may also be fitting difficulties to be considered: a rever-collar, for instance, does not set and fit so well in a style which has a wide wrap and a high-closing neckline.

The general method of cutting rever-collars is given below and is illustrated by three examples (see Plate 25), each showing a different set of the collar at the neck. *The Centre shoulder seam must be used* in every case.

Outline the front of the bodice and adjust it to a Centre shoulder seam. Leave enough paper at the top and to the right for the back of the collar part and for any fancy shaping of the rever.

Rule a crease line through NP from a point on the edge of the wrap (occasionally on CF line), from a level suggested by the style. Continue crease line a few inches *above NP. On this extension* the back part of the rever-collar is constructed by using the back of the bodice pattern.

Place the back of the bodice, *reversed*, NP-s matching with its neckline to follow the crease-line extension or, for a flatter fit, to overlap it. Outline the back so placed, i.e. *the top only*, and remove it. Complete the collar with the help of this outline: first measure collar depth on CB, and from there run its Outer edge into the rever part of the bodice.

PLATE 25—REVER-COLLARS

In the three examples in this Plate the crease line runs from the same point on the edge of the wrap, i.e. from the level of the Bust Line. This point will vary for different styles, but it is useful to note that the fitting of these collars always becomes more difficult when this point has to be taken much higher, for instance for a style with high-rolling revers.

Example 1 gives the **basic position**, in which the back neckline follows exactly the crease line extension.

This position is often used for simple V-shaped roll collars similar to the one in the first sketch. It must be noted, however, that it produces a very close-fitting collar at the back, as the Outer edge works out too short. There is a tendency for the neckline seam to show in the back from under the tight collar edge. The fit can be improved a little by adding length to the Outer edge beyond CB, and also by some stretching of the edge; but on the whole it is best to avoid using it for these popular styles, which fit better when cut with an overlap, as shown in example 2.

The basic position is mainly suitable for collars which need a close fit at the back of the neck and a tight Outer edge. Such may be various collars of the Tuxedo type which run into an open front, not meeting (buttoning) or crossing over, but with revers falling in vertical lines. These collars may need even further tightening of the Outer edge to prevent fluting.

The facing is always cut to the same shape as the pattern and taken to a suitable depth, usually 8–10 cm inside CF. It generally has a CB seam.

Example 2 shows **the most frequently used position**, with CB overlapping the extension by 3–4 cm (up to 6 cm).

It will be easily understood that the farther the CB overlaps the crease line, the longer the Outer edge of the collar will work out and the flatter its fit will be, and vice versa. This can be compared with the lengthening of the Outer edge by slashing and shortening by darting, described in Chapter IX.

The 3 cm overlap is a good basic proportion for the closer fitting V-shaped roll collar and it can be increased to 4–5 cm for a looser fit. This is often needed for a higher neckline, for the higher the neckline, the looser the Outer edge must be; or for a two-way collar which can be worn buttoned up higher or lower (edge must be loose enough for the higher fit). This small overlap is suitable for a big variety of styles.

Example 3 shows yet another position in which the back overlaps still further, coming either half-way between crease line and front shoulder or even farther over. This suits a variety of collars requiring a long Outer edge, styles which either roll over with **a flatter effect at the neck** or, on the contrary, stand up, as for example the Storm collar (sketch 2).

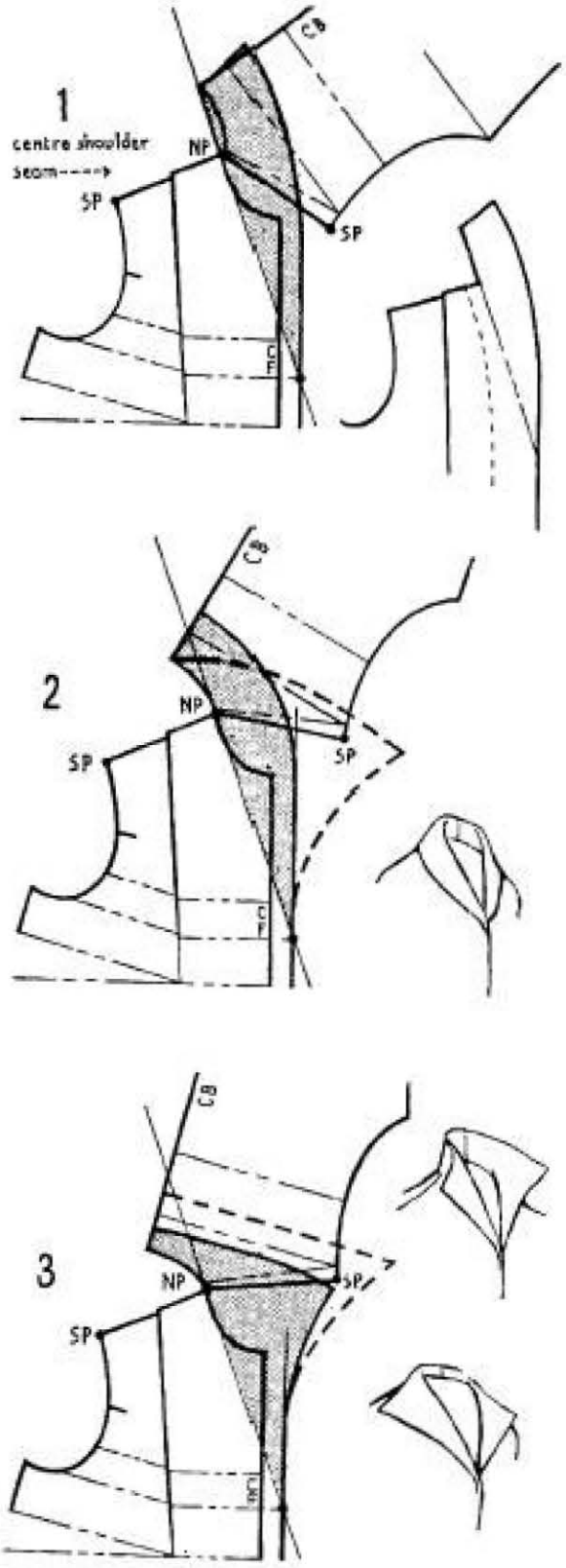
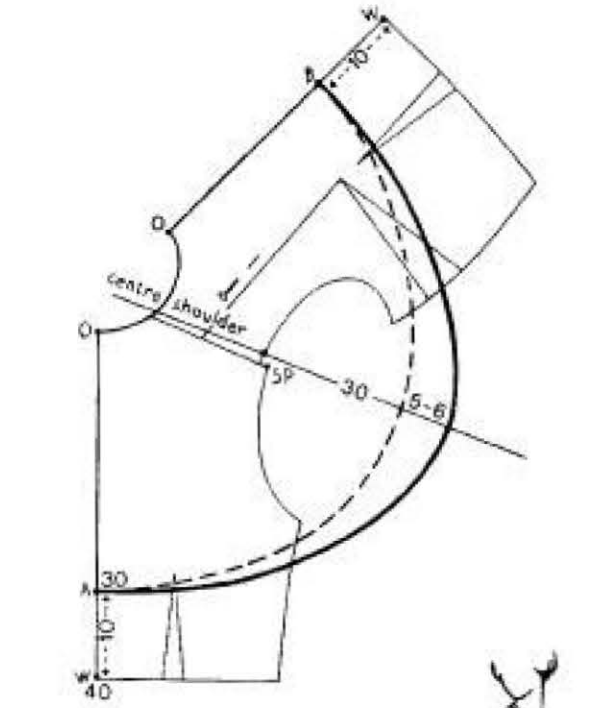
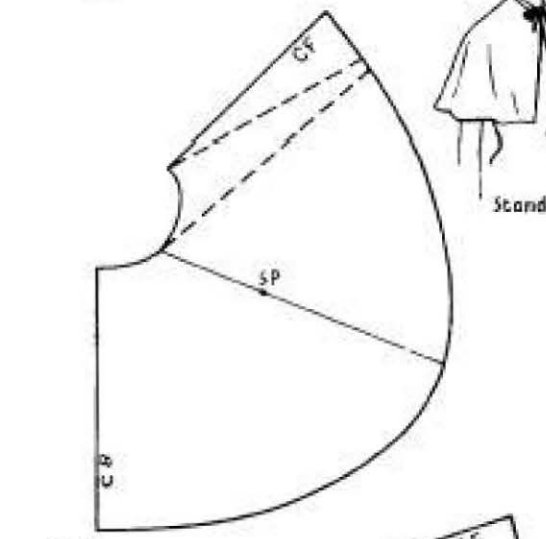
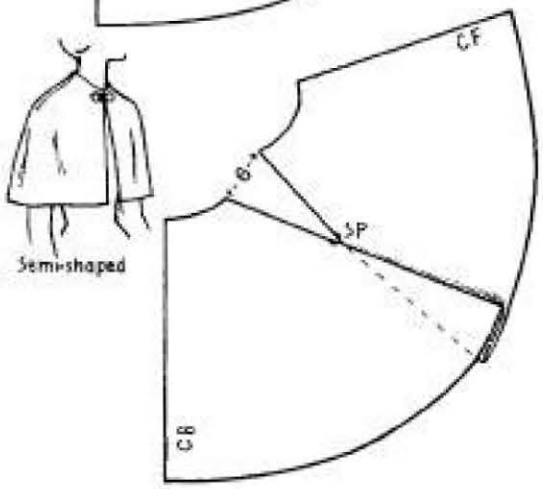


PLATE 25



Standard





Semi-shaped

PLATE 26

CAPES

There are three basic *types* of cape from which many different *styles* can be developed. These three foundations can be described as:

Standard loose fitting cape;
Semi-shaped cape;
Shaped or close fitting cape.

In each case the description refers mainly to the fit of the cape round the shoulders, as well as to the fullness in the hem. As with all circular patterns (see Chapter XVI), this fullness increases with the length of the cape. The length, therefore, is also an important factor in cape-style interpretation.

THE STANDARD LOOSE FITTING CAPE

The cape has an easy fit round the shoulders and does not outline them definitely: there is always a certain amount of hem fullness, appearing generally as a few flares or flutes below the shoulders. Such a cape cut to waist or elbow length (the two correspond approximately) would measure about 2¼ m round the hem. Since the fullness develops with length, it may not be sufficiently noticeable in the sketch of a very short cape. But in such a case the general easy fit would indicate the basic cut.

THE SEMI-SHAPED CAPE

This cape is less full in the hem (by nearly ½ m at elbow length), and definitely outlines the shoulders and the top of the arms. The fit is achieved by means of a shoulder dart which breaks the continuity of the combined shoulder and Top line of sleeve, forms an angle to accommodate the shoulder point and at the same time reduces the width round the hem. The dart (or something equivalent to it in effect, such as a seam, a yoke, gathers, etc.) is, therefore, an essential feature of this cut and follows the general principle of fitting a flat piece of material over a curve of the figure (in this case the shoulder bone). It is not a deep dart, however, and it does not mould the shoulder nor eliminate all hem fullness.

THE SHAPED OR CLOSE FITTING CAPE

This is tighter still and can be quite close fitting round the shoulders and upper arms (with less than 2 m round the elbows). The required hem width of these capes can usually be established by taking an actual measurement at waist level, passing the tape measure over the arms (elbows) held as close to the figure as desired.

Shaped capes are used for many fancy styles (fur capes, long, tight evening capes, etc.) and they frequently have raised and squared shoulder parts on the principle of raised sleeve crowns, as well as other details of style which make these patterns too elaborate to be dealt with at this stage.

PLATE 26—CAPES

To cut a **Standard loose fitting cape** (FIG. 1) join the bodice at the shoulders as for cutting a Flat collar, outline the neckline and then draw the lower edge according to the style.

For a style of even length all round, measure and mark the required length down the CB, and then from here measure the *remaining CB length* to the waist. Apply this last length in the CF, measuring it from the waist *upwards* to get the hem in the front on the *same level* as the back. At the side (shoulder) measure the CB length from the neck and add to it 5–6 cm extra to allow for the angle of the shoulder: otherwise the cape will be too short here. Draw an evenly curved line through these points (FIG. 1).

This basic cape is an extension of the Flat collar, and its width round the hem is not controlled or fixed in any way: it depends on the length of the cape. If a fuller cape is required, for instance for a style which shows fullness coming from the neckline (and not developing only below the shoulders), then this standard cape must subsequently be flared as described in Chapter XV (Flares).

To cut a **Semi-shaped cape** (FIG. 2) join bodice at shoulder and first outline a Standard cape as described above. Cut it out, after marking *the Centre shoulder seam* on it. Slash on this shoulder line to SP. On the continuation of this line pin out a dart from the hem up to SP which will cause the slash above SP to open out and thus give *a 'dart'* on the shoulder. This dart may be quite small (3 cm) or up to 6 cm, but should not be allowed to be deeper (the increase in the shoulder dart would, of course, be the result of a deeper dart pinned from the hem upwards). Thus, with a deeper dart on the shoulder the hem width of the cape is reduced.

The single shoulder dart may be replaced by a seam, by several smaller darts or gathers; it may be transferred to another position and used in many different ways. Pleats, flares, draped folds, etc., can be added to produce a big variety of **cape styles.**

CHAPTER ELEVEN

SKIRTS

THE IMPORTANCE OF A GOOD LINE IN SKIRTS

A good *line* is the most distinctive feature of a well-cut skirt. From the point of view of fit nothing matters so much in a skirt as its line, i.e. the way it *hangs* and the **outline or silhouette** it gives to the figure. This is the first and most important thing to consider when cutting skirt patterns.

The 'line' of skirts changes with fashion, and what is correct at one time may be completely wrong when a new fashion sets in. On the other hand, one must remember that, whatever the fashion of the moment, there is always a big variety of skirt *styles*, and different *types* of skirt are used for different purposes (e.g. sports wear, evening wear, etc.), so that at all times the cutter may have to deal with more than one line, requiring the use of more than one skirt foundation.

The line of skirts varies in many different ways. It may be straight from waist to hem; or appear to be tighter at the hem than round the hips; it may follow the 'natural line' of a figure in motion, i.e. a walking figure and widen out a little towards the hem; it may be bell-shaped, moulding the hips but widening round the knees to a stand-away hemline; it may have flares coming from the waist, producing a full, fluting hem. All these line variations must be noted and interpreted correctly by using the right type of skirt foundation.

Once a certain line has been given to a skirt block, it will be reproduced in all skirt *styles* cut from it: therefore the **choice of a suitable skirt block** is the first step in skirt pattern designing.

SKIRT BLOCKS

The most convenient type of skirt block is one which can be adapted to every fashion change and to every style requirement without losing its **correct proportion between waist and hem.** These two factors are closely related, so that a change in one produces a change in the other, a fact easily demonstrated by modelling skirts on the stand. It is most important that this connection between waist and hem should not be ignored or lost when adjusting a skirt pattern to a different line.

The skirt block described in this chapter is so constructed that it can be adapted to every change of line in a way which ensures the automatic adjustment of the correct waist-to-hem proportion. The method is based on the cutting up of a rectangle of a certain length and width into several strips, joined together only on the Hip Line (which is fixed). The spreading out of these strips at the bottom (the hem) causes them to overlap at the top (the waist), so that the wider the hem, the smaller the waist, and vice versa.

The width added to the hem depends on the *line* to be given to the skirt. It is usually expressed as a fraction of the skirt *Hip Width* (which is equal to Hip measurement + 6 cm or $\frac{1}{4}$ Hip + 3 cm). Thus if $\frac{1}{4}$ or $\frac{1}{5}$ of the skirt Hip Width is added to the hem of the rectangle, the result is a **slightly shaped skirt**, which follows the natural line of a walking figure. It may be varied a little according to the influence of fashion, personal taste or shape of figure (e.g. $\frac{1}{6}$ may also be used in some cases). The addition of $\frac{1}{10}$ of the Hip Width to the hem of a rectangle gives a **straight skirt.** The addition of $\frac{1}{2}$ of the Hip Width to the hem produces a **bell-shaped line**, with a stand-away hem. If nothing is added to the rectangle the skirt will appear tighter round the hem than round the hips, more so or less so according to the shape of the figure and the length of the skirt (e.g. knee-length giving an almost straight skirt and ankle-length—a 'hobble skirt').

Therefore, by the simple method described above, the skirt can be given a variety of 'lines' or silhouettes, passing from a rectangle (the 'basic line') through several stages of shaping to a *fully shaped line* (i.e. tight waist with maximum hem width, but without any change in Hip Width). Any further widening must involve increase in Hip Width as well; by cutting through the Hip Line of a Fully Shaped skirt it is possible to transform it into a *slightly flared* and finally into a *fully flared Circular skirt* (Plate 28).

The Standard skirt block described in this chapter is based on the 'natural line', i.e. the line of a figure in motion. It has a hem width equal to $1\frac{1}{2}$ *of the Hip Width*, which makes it stand away a little. In practice, it is the most generally useful type of skirt block.

Two other foundations, one straighter and tighter (the Straight skirt), the other wider (the Fully Shaped skirt), are given at the end of the chapter as useful additional skirt blocks.

PLATE 27—LINES OF THE SKIRT

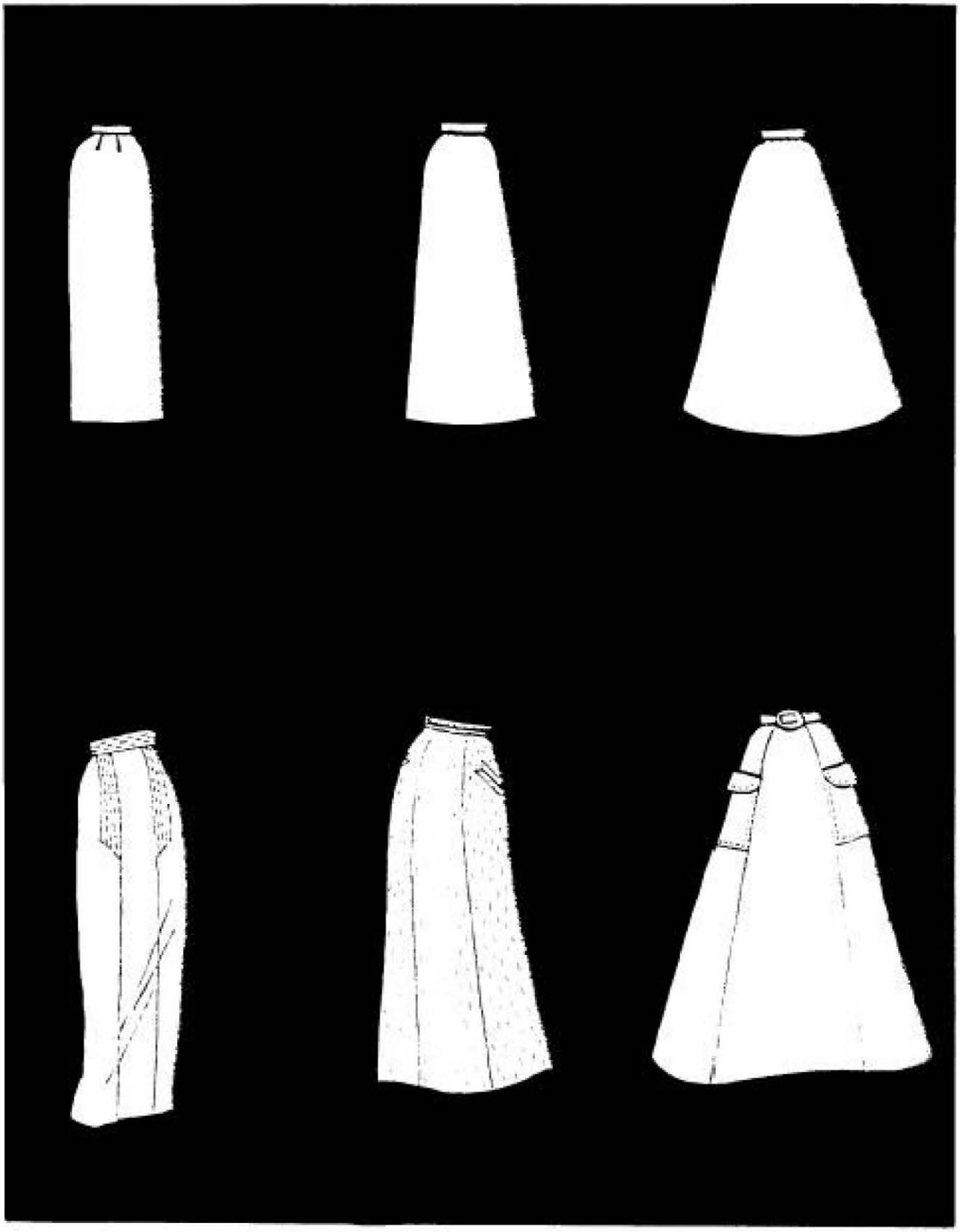


PLATE 27

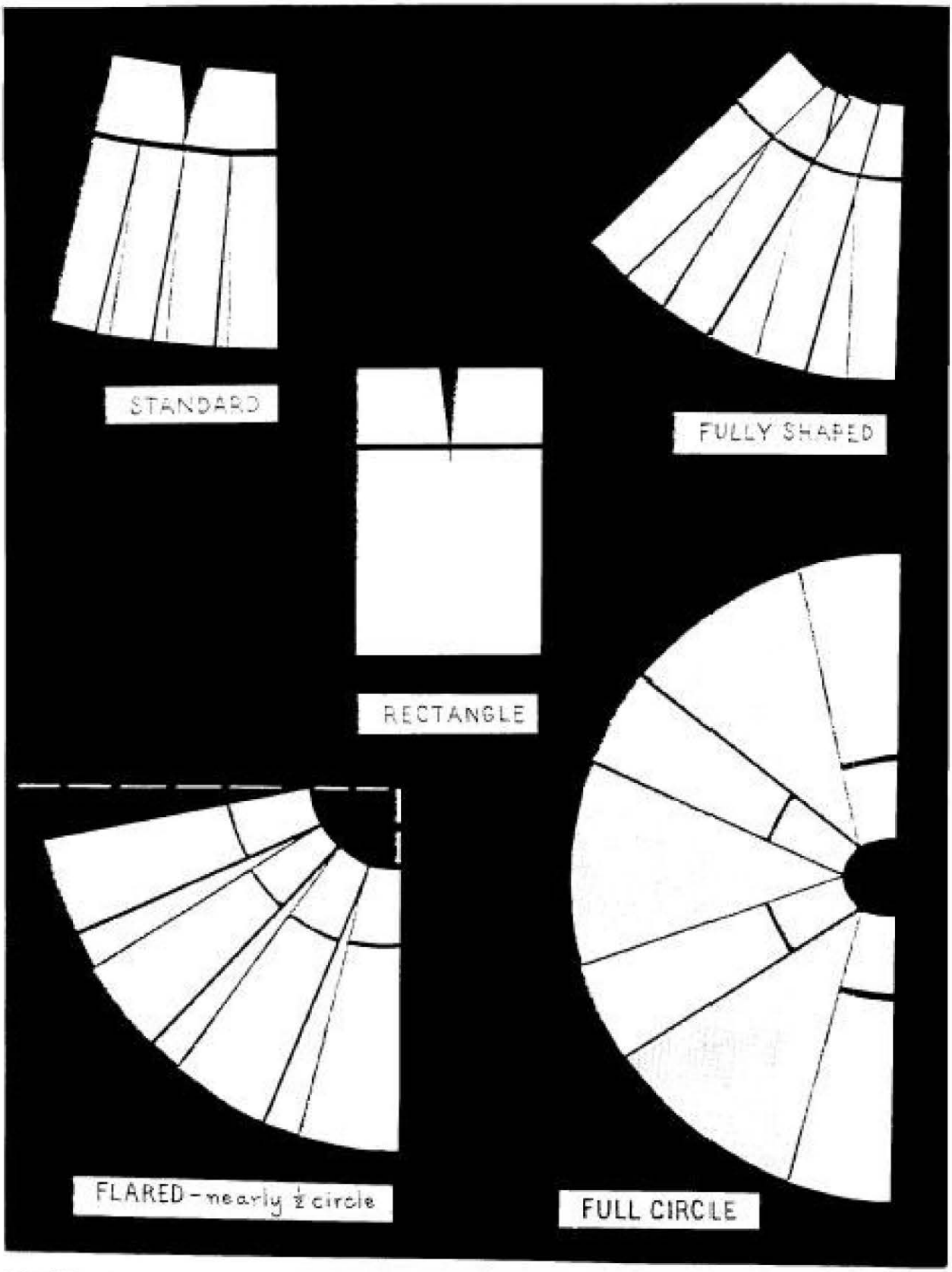

STANDARD
FULLY SHAPED
RECTANGLE
FLARED – nearly ½ circle
FULL CIRCLE

PLATE 28

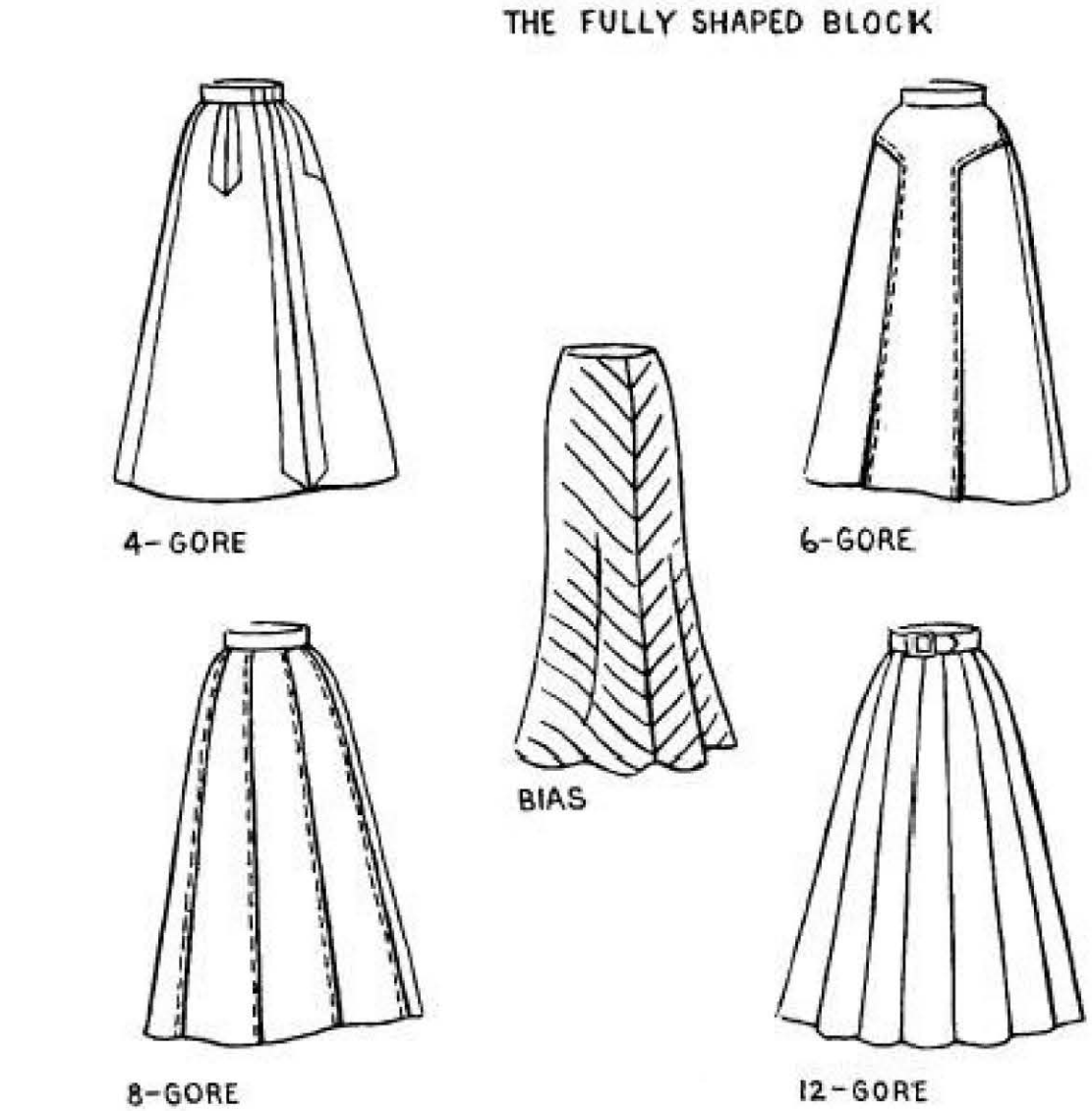


PLATE 29

Plate 27 shows the three basic **'Lines of the skirt'** described in this chapter as the Standard, the Straight and the Fully Shaped skirt blocks. Each 'line' or silhouette is illustrated by **the same style**—a six-gore Panel skirt.

Plate 28 shows **how the Skirt Foundation changes**, progressing from a simple *Rectangle* (the basic foundation) through various stages of 'shaping', until it becomes a *Full Circle*.

In the earlier stages the Hip Width is *fixed*, but after the Fully Shaped skirt stage it increases together with the hem.

Plate 29 shows a **variety of skirt styles** cut on **the same foundation**. The middle skirt, though also cut from the Fully Shaped block, does not 'stand away' at the hem but clings to the figure, as the result of the material being used *on the bias*.

THE STANDARD SKIRT BLOCK

Measurements (average)

Hips	98 cm (49)
Waist	70 cm (35)
Length	65 cm (or as required)

The measurements required for the drafting of a skirt block are those of hips, waist and length.

The Hip measurement is taken quite tightly round the hips, on a level between 20 and 25 cm down, but on an average 22 cm below the waist, where it is safer to measure for the *maximum* hip width on a modern figure. It is often taken tighter for a slight figure (or for a specially tight fit) and looser for a large figure. Use half for draft.

The Waist measurement is taken as tightly as a waist band is to fit. One should avoid pulling in the tape too tightly (which is easily done when measuring small figures).

The Length is taken down the front (CF). For an average modern figure the side and back lengths are neither necessary nor very reliable, and only tend to complicate the drafting of the skirt pattern. They may, however, be taken in special cases and must be checked at a fitting. The skirt length varies with fashion and type of skirt (e.g. sports wear, ordinary wear, evening wear). The length given to the skirt block is the one most frequently used for ordinary wear. The length to the ground may be taken at the same time for checking purposes and as an indication of a person's height.

PROPORTIONS

In the pattern the **Hip measurement** is increased by 6 (5) cm (3 cm on the half-pattern). It must be remembered that this fitting allowance is applied on the low level of 22 cm below the waist. On the higher 20 or 18 cm level, used by many cutters, *it works out less.*

When it is fashionable for skirts to be worn tight the 6 cm Hip allowance can be reduced to 4; and at all times, when making patterns of close fitting styles, 2 cm or more can be lost round the hips by simply taking off 0·5–1 cm all the way down CF and CB.

The Waist of a separate (or Tailored) skirt is usually made equal to the Waist measurement. For a dress skirt, i.e. a skirt attached to a bodice, the waist is made 4–5 cm bigger (2–2·5 cm bigger on the half-pattern). This may vary with style and fit of dress.

The Length measurement is used down the CF of the pattern. The back is made 1 cm higher only when necessary, mainly in larger sizes. The extra height above the Hip Line must be checked, however, on the figure and adjusted according to shape and posture. It is usual nowadays to omit it for the smaller sizes, making the back the same height as the front. Sometimes the back has to be cut lower than the front to achieve a better fit and hang of the skirt, or to suit fashion, style or method of waist finish. The important point to note is that on every figure *the Hip Line* of the skirt *must be parallel to the ground*, and that the extra height in the back is added or omitted for the purpose of achieving this correct hang of the skirt.

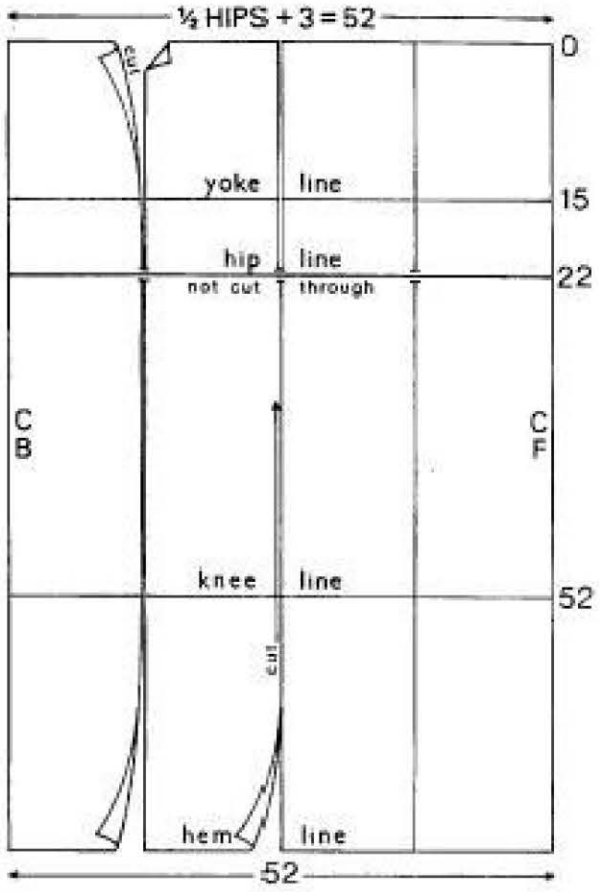


FIG. 1/XI

The finished 'Hip Width' of the skirt will be

98 + 6 = 104 cm on the half-pattern 52 cm

The finished Waist

70 cm—for a separate skirt	35 cm
70 + 4 = 74 cm—for a dress skirt	37 cm

CONSTRUCTION LINES

In addition to the CF, CB, Waist and Hem Lines, i.e. *the four sides of the rectangle*, the construction lines used are as follows:

The Yoke Line—15 cm below the waist—represents the usual depth of hip yokes, the length of the smaller waist darts, the position of pockets, etc. (all these can, of course, be higher or lower).

The Hip Line—marked on the pattern 22 cm below the waist for the average modern figure. This is the *basic line in skirt drafting*, the line on which is applied the basic proportion of ¼ Hip measurement + 3 cm, which establishes the **'Hip Width' of the skirt.**

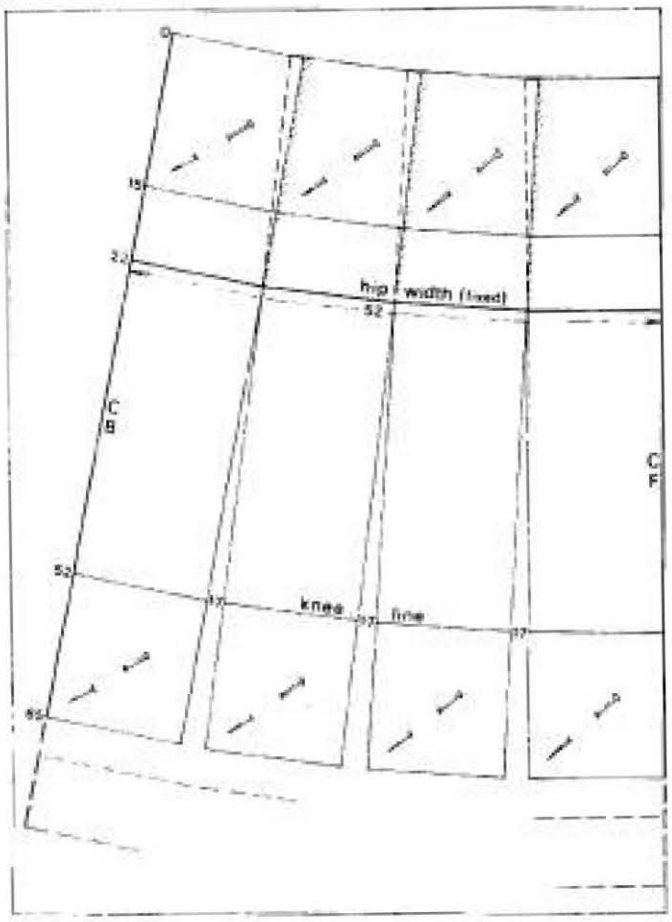


FIG. 2/XI. With the metric measurements it is more convenient to make the 1½ Hem width addition at Knee line level

The Knee Line—52 cm below the waist. On the figure it comes a little above the knees. This is the line from which is added any fullness (e.g. pleats, godets, etc.) which in the sketch appears to come from knee level. The exact position of this line is of little importance.

These proportions can be used for most figures, and there is no need to adjust them except in the case of the very short or the very tall figure, when the lines can be moved up or down a little.

THE DRAFT—FIGS. 1 and 2

Cut a rectangle of paper 65 × 52 cm

The length of the rectangle is the length of the skirt. It is advisable to begin with a standard length for everybody and to adjust this to the individual length at a later stage. This gives the skirt a *line* and hem width which are more in keeping with the height of the figure.

The width of the rectangle is always equal to the basic proportion of ¼ Hip measurement + 3 cm. In our example of 98 cm Hip measurement it is

$$49 + 3 = 52 \text{ cm}$$

The shorter edges of the rectangle are the waist and the hem. The longer—the CF (right) and the CB (left). From the top edge (the waist) measure down both sides:

15 cm for the Yoke Line
22 cm for the Hip Line
52 cm for the Knee Line

Connect the points, ruling straight lines across the rectangle, all parallel to the waist and hem.

Fold the rectangle lengthwise through the centre and then again in half. Crease the folds well. When opened out the rectangle will be divided into four sections or strips of equal width (FIG. 1/XI).

Cut along the crease lines from the hem *up* to the Hip Line, then from the waist *down* to the Hip Line, but without cutting through the Hip Line (0·3 cm remains uncut).

Place the four strips, now holding together only on the Hip Line, on to a larger sheet of paper with the right-hand edge in line with the edge of the new sheet. Leave plenty of paper above and to the left of the cut rectangle: paper need be left below only if the length is to be increased later.

The addition of the extra width below the Hip line is done **at the Knee line** level.

To work out the proportion to be added in the three spaces between the 4 strips, first take one tenth of the **half** Hip width, i.e. in this case 52 which will be 5·2 cm. Then, converting this into millimetres (52 mm), divide by 3 which gives 17 mm (ignoring the odd mm) or 1·7 cm to be introduced at Knee level into the three spaces between the cut strips.

After pinning the first strip to the paper underneath, move the lower end of the second strip 1·7 cm away from it and pin it in this position. Then move the third 1·7 cm from the second, and so on, until all the strips are pinned correctly at equal distances from each other. As the strips

are separated at the hem, they overlap at the top, making the waist smaller and curving it like the hem. All the other construction lines also curve.

Before pinning each strip, smooth it out well and allow it to take a natural position, *overlapping* at the top *sufficiently to lie quite flat.*

When the strips are carefully pinned, each held by 2–3 pins, mark through with a tracing wheel all the construction lines, which are now curved. Outline the skirt and, before cutting out, *adjust the length*, i.e. add to it if it is to be more than 65 cm. At this stage one can also make the back 1 cm higher than the front, if this is considered desirable. To do this add 1 cm above the CB and from here draw a new Waistline through a point 1– cm above the middle, gradually sloping it down to the original CF level.

After removing the strips and cutting out the skirt pattern, pencil in at once all the traced lines. Any shortening of the length to suit an individual length measurement should also be done at this stage.

Before shaping the waist, the half-pattern must be divided into front and back by indicating the side seams.

SIDE SEAMS—FIG. 3

Fold the pattern lengthwise through the middle. It must fold in half correctly as this is a test of its accuracy. The crease is the Centre line and most skirt styles have their side seams exactly on it. However, some 2-piece tailored skirts may have their side seams a little to the front of it (to reduce front waist darting); while some dress skirts may have their side seams 1 cm or so to the back of it, to match the bodice seam better.

Draw the 'Tailored skirt seam' 2 cm to the front of the Centre line, and parallel to it, and the 'Dress seam' 1 cm to the back of it. The 'Dress seam', however, will have to be checked with the bodice side seam after the skirt waist darts have been planned (see end of chapter).

WAIST SHAPING—FIG. 3

Measure from left to right along the Waistline half of the Waist measurement, i.e. in this case 35 cm. Mark the point: the *remaining* length to CF is the Waist Reduction (WR), i.e. the amount to be taken out in darts to make the skirt fit tightly round the waist.

The biggest and deepest dart is always in the side seam, where it becomes a *concealed* dart. The remaining fullness is taken out in 1–2 darts in the back, and also sometimes in a small additional dart in the front. This is the **classical dart arrangement** with the side seam and back darts reducing all or most of the fullness.

The Waist dart arrangement used **at the present time** is a little different from the classical one. Now the WR is more evenly divided round the waist, with more prominence given to a front dart. A simple and quite satisfactory plan is to take **half of the WR** (or just over or just under) **for the side seam** and then divide the **remainder between back (¾) and front (¼)**, where the dart is usually not big and is sometimes replaced by a fold, by easing, or a combination of several methods, according to style.

The deeper a dart, the longer it must be in order to taper off neatly without producing a 'poke' at the end. The side dart, the deepest, being in a seam, can be drawn to the Hip Line or 1–2 cm lower to enable it to run smoothly into side seam without a break. It should be more or less curved *according to the shape of the hips*. The back darts are usually stitched only to the Yoke Line level or just a little lower (1–2 cm) and should not be made more than 3–4 cm deep. Their lines are usually straight, but may be curved slightly to suit the shape of the figure.

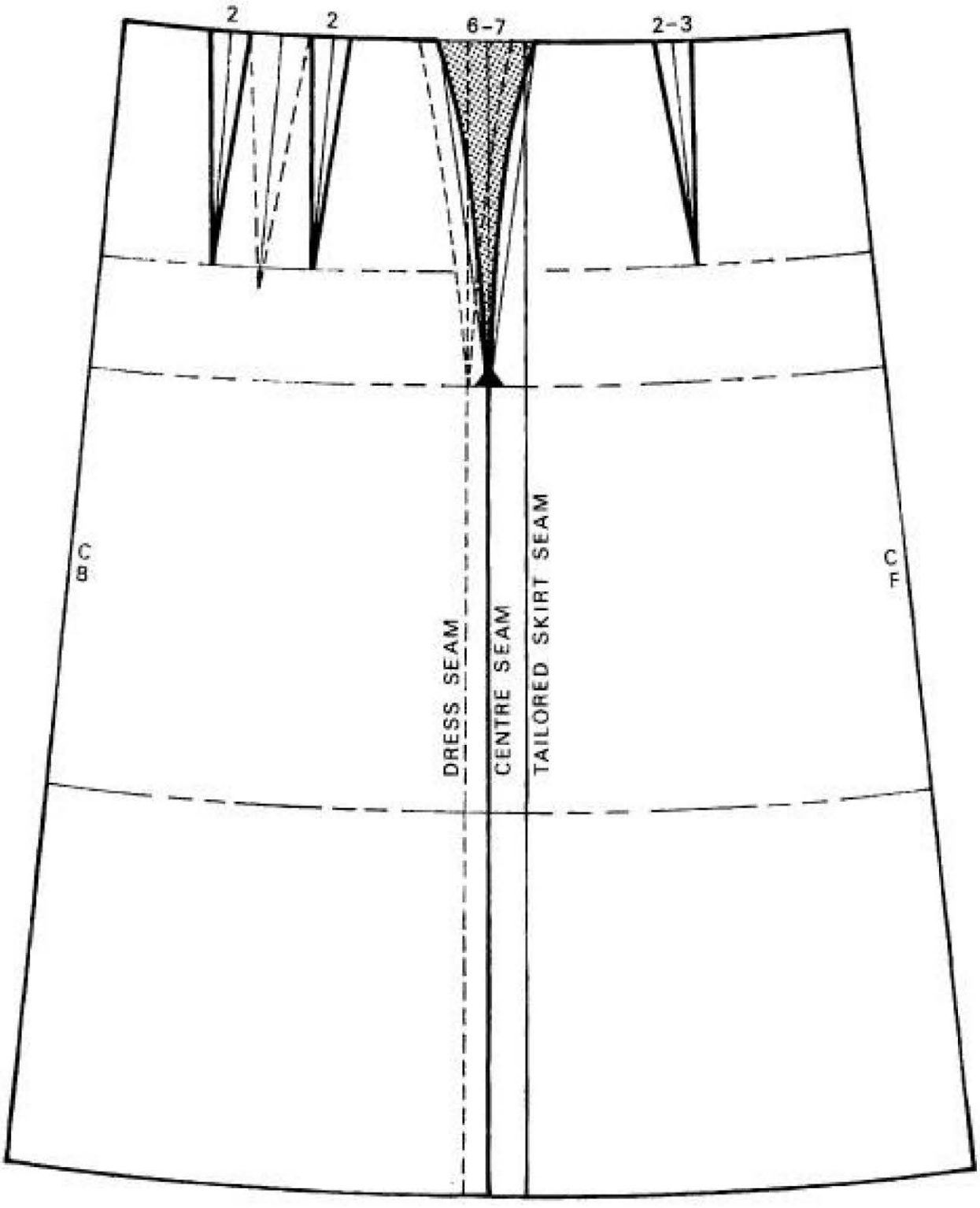
THE PLANNING OF WAIST DARTS

To plan a side seam dart measure its depth at the waist equally on both sides of the side seam. From these points rule two straight guide lines meeting on Hip Line level, and over these draw slightly curved lines, running them smoothly into the side seams at Hip level or lower. It is on these lines that the pattern is cut when separating the back from the front.

For the back darts, first plan the two guide lines, placing them at approximately one-third and two-thirds distance between CB and the side. In practice, it is usual to draw the first construction line 8 cm from CB and the second 6–7 cm farther, both parallel to CB and coming down to the Yoke Line. When only one dart is used it can be drawn *provisionally* between these two lines (or matched to bodice dart, if preferred). In a block pattern, however, *no dart position must be considered as permanent*, for in practical pattern designing all darts may have to have their position changed and be moved to suit style and fashion requirements, or to match definite lines and darts on the bodice. This is done quite simply by moving the guide lines and re-drawing the darts where necessary.

In an average case, in a tailored skirt with a 13–14 cm WR on the half-pattern (FIG. 3) one has a 6–7 cm side seam dart, two 2–2·5 cm darts in the back (planned as explained above) and one 2–3 cm dart in the front waist. In dresses, with the same side dart, it is usually possible to have only one instead of two darts in the back, though possibly a slightly deeper one. In any case 8 cm is usually considered a maximum size for a side dart and 4 cm for the shorter ones, because deeper darts do not always adjust themselves well to the shape of the figure and may be difficult to handle in sewing and pressing.

The correct distribution of the WR is affected by the shape of the figure (the waist and below), and whatever method is used for the planning of the darts, they may have to be adjusted at the fitting.



STANDARD SKIRT

FIG. 3/xi

The planning of the darts described above applies mainly to a skirt *foundation*. For fancy skirt styles there are few rules, as the waist reduction has to be planned according to the lines and seams of the style. The following few suggestions, however, may be useful when dealing with the **waist shaping in a fancy skirt style**:

(*a*) The deepest dart is always in the side seam. When there is no side seam, the side dart is usually slightly reduced because it is then actually used as a dart.

(*b*) The next deepest dart can be taken out in a back Panel seam, if there is one.

(*c*) In a C B seam it is not advisable to take out more than 4 cm (i.e. more than 2 cm on the half-pattern).

(*d*) In a front Panel seam a ¼ of the side dart value can be taken out, reducing the side dart accordingly.

(*e*) In a C F seam one can usually take out 0·5–1 cm, on the half-pattern.

Whatever the dart arrangement, the total W R is constant for the same figure and the same skirt line.

ADDITIONAL SKIRT BLOCKS

As already explained, the Standard skirt block follows the natural line of a walking figure and widens a little towards the hem. It is a basic skirt shape, easy to fit, precisely because it so closely follows the natural shape of the figure, and allows for movement.

This does not mean, however, that every skirt style can be cut from it, or that it is the most suitable line for the fashion of the moment. It is therefore useful to have two additional blocks: a Straight skirt and a Fully Shaped one. It is also necessary to know how to adjust the Standard skirt quickly to *a variety of lines*, both straighter and more shaped, since this is frequently done as a preliminary step in skirt pattern designing.

One or other of the additional skirt blocks may at times become the fashion block of the moment and will then be used more than the Standard skirt. Change of fashion, however, is not the only reason for change of block: often a definite line is preferred for a certain style or type of skirt (e.g. the shaped line for sports wear, the very straight one for some draped styles). It should also be remembered that figures vary in shape: some are straight from the waist down (big waist, small hips); some widen below the waist (small waist, big hips). It is obvious that the skirt line which follows more closely the shape of the figure will give a better fit, and this is often a more important consideration than strict adherence to fashion.

The additional skirt blocks can be made by following the basic method explained above, adapting it in each case to a different proportion between the waist and the hem; or they can be produced *by direct adaptation of the Standard skirt block*.

THE STRAIGHT SKIRT BLOCK

When the Straight line is in fashion it is essential to have a separate Straight skirt block in addition to the Standard block. At other times it is sufficient to know how to 'straighten' the line of the Standard block, whenever this appears to be necessary.

The Straight skirt can be made in the same way as the Standard block and by using the same strips, but opening them out much less at the hem. An addition of 1·2, or even 1 cm, at each of the three points is sufficient. It makes the hem only a little wider than the Hip Width.

As the strips overlap much less at the top, the waist becomes wider and the W R bigger. This requires deeper darts and always an additional dart in the front.

The Straight skirt block can also be produced by the quicker **method of reducing the hem width of the Standard block by 'darting'**. As a general method, this is often applied in pattern designing whenever a tighter hem and a closer fit round the knees is necessary for a correct interpretation of a style or for a better fit.

Make a copy of the Standard block, indicating the Hip Line. From the waist cut along the Centre side seam (or, according to style, along one of the other side seams), *as far as the Hip Line* (FIG. 4).

At the hem mark a 5 (6–7) cm 'dart', measuring it equally on both sides of the seam, i.e. 2·5–3 cm to the right and the same to the left. Fold out and pin the amount as a 'dart', running it off to nothing on the Hip Line, just under the slash. As the dart is folded out, the slash above it opens, adding to the existing width of the waist, and therefore also to Waist Reduction (W R).

Lay pattern on another sheet of paper, pin, trace round and cut out. This stage can be omitted for speed in practical pattern designing, and the 'darted' block used for further adaptation, with dart pasted down and gap secured by a piece of paper underneath.

Before cutting out, adjust the hem by dropping it in the middle where the folding out of the 'dart' has produced an upward break in the line. The same applies to the line of the waist, which must be lowered in the middle above the side seam; also to any other construction line which may be referred to in further style adaptation. All these lines will have lost some of their curve and become straighter.

The additional W R, indicated by the gap at the waist, should be measured and added to the existing darts.

If a tubular shape is required, the hem can be reduced until the pattern becomes a rectangle.

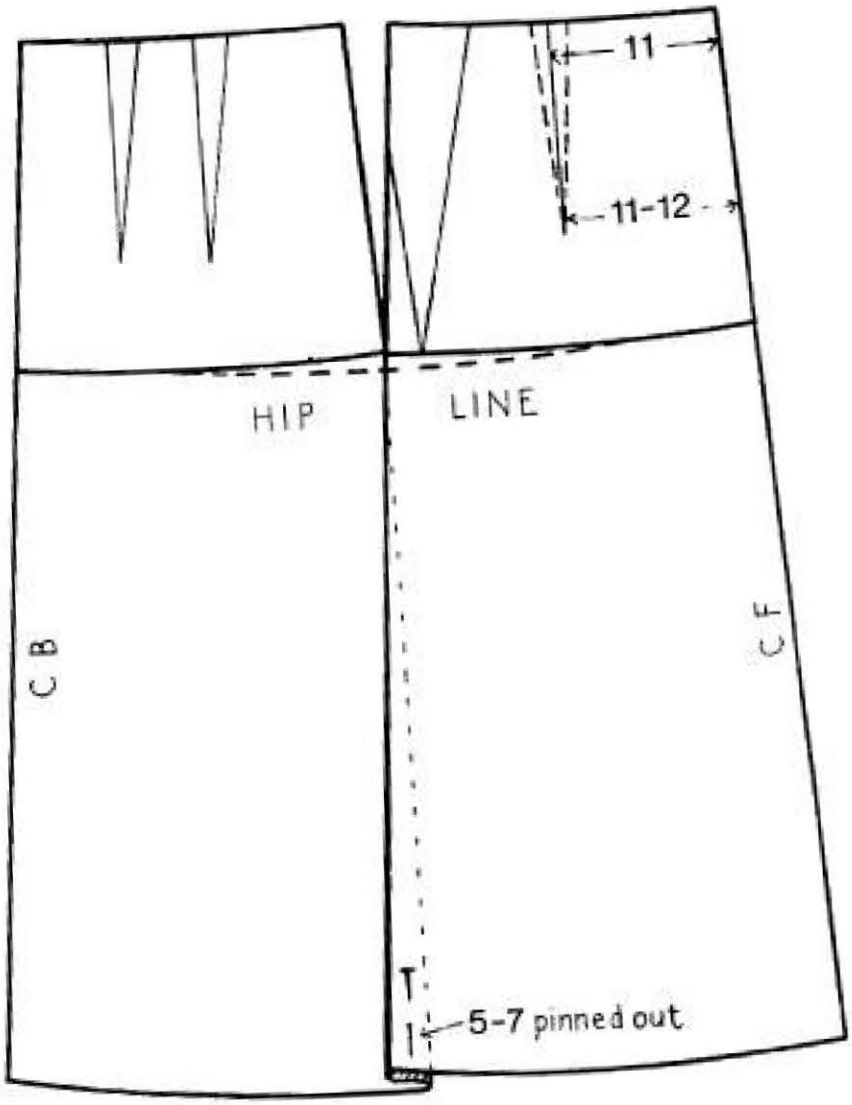


FIG. 4/xi STRAIGHT SKIRT

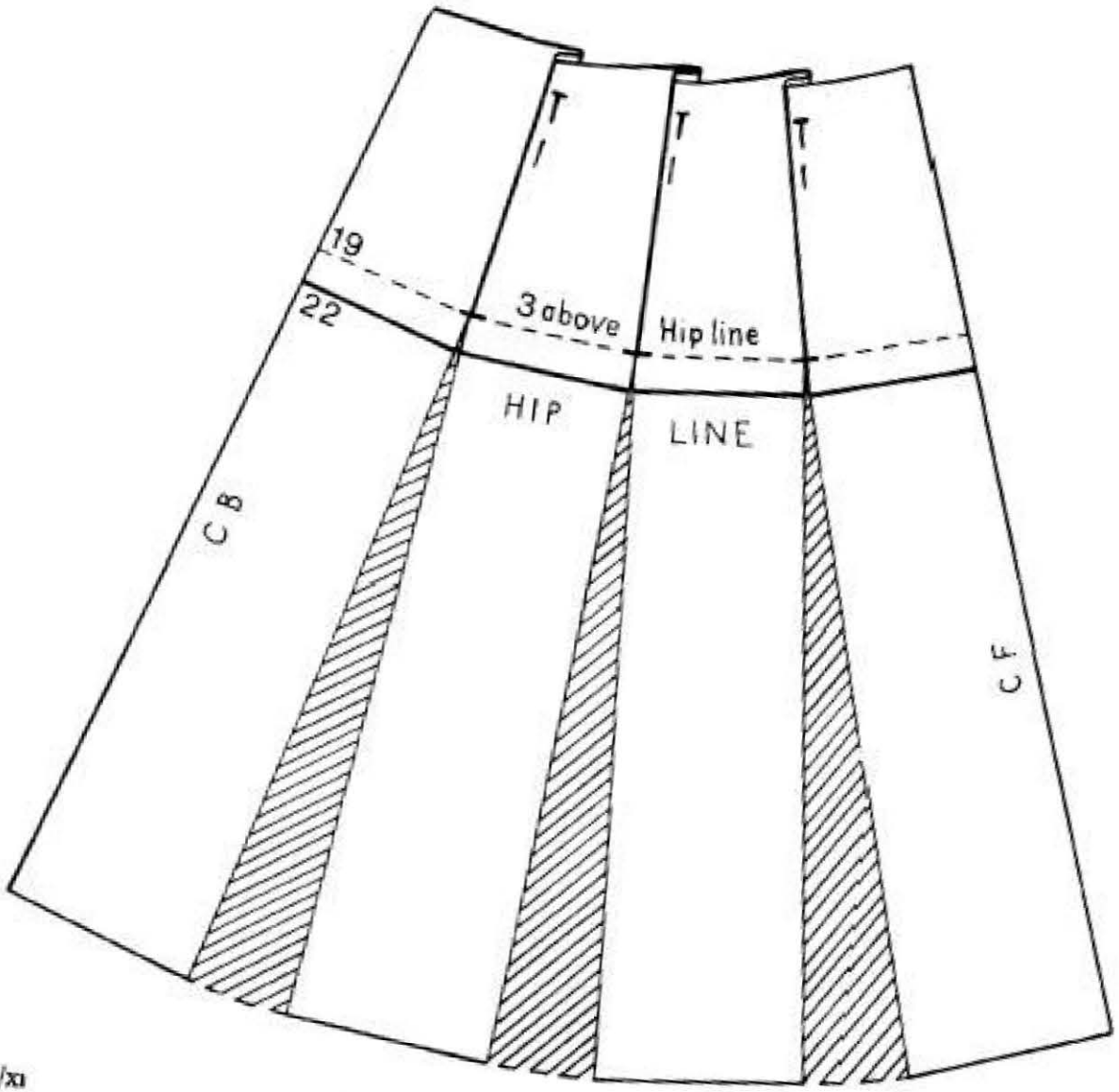


FIG. 5/xi

FULLY SHAPED SKIRT

THE FULLY SHAPED SKIRT BLOCK

This is a type of skirt which fits as neatly round the hips as the Standard block but has more fullness in the hem, a more stand-away line below the hips and *no visible darts at the waist*. The extra width round the knees and in the hem is obtained by transferring all but a small amount of the WR from the waist into the hem, leaving only 6–7 cm to be reduced in the side seams.

The Fully Shaped skirt varies for different figures according to their measurements, i.e. according to the difference between waist and hips. The smaller the waist in proportion to the hips, the more WR there is to transfer into the hem: thus for a figure with a small waist the skirt will be fuller in the hem.

The Fully Shaped pattern can be made from the strips which were used for the Standard block. They should, however, be separated on Hip Line and 'joined' 3 cm higher: this is done by placing them on new paper, one next to the other, just touching 3 cm *above* the Hip Line (pins stuck into table will hold them down), but overlapping at the top to reduce the waist to ¼ waist + 3 (or 4) cm. The amount of overlap is usually worked out first. In this example a 52 cm width (the rectangle) must be reduced to 38 cm (¼ waist + 3 cm), which gives 14 cm to be taken out, i.e. 4–5 cm for each overlap. As the strips are overlapped at the top, they open out at the bottom to give a wider hem. Outline and cut out pattern. Trace the Hip Line through. Mark the side seam by folding lengthwise in half. The remaining WR (3–3·5 cm) is taken out in the side seam in a short dart. It is not advisable to reduce waist to a tight waist measurement, as this usually makes the top of the skirt too tight.

The other method for **making this pattern by adapting the standard skirt** is shown in FIG. 5 opposite.

On a copy of the Standard block, with only the Hip Line indicated (no seams or darts are necessary), draw a new 'raised' Hip Line 3 cm above the original one. This eases the fit of the top part which in this skirt tends to be tight. Fold skirt lengthwise in half twice to obtain three crease lines. From the hem cut on each crease line up to the raised Hip Line. At the top plan equal darts on each crease to reduce waist to ¼ waist + 3 (or 4) cm. As this is the Standard block (not the rectangle), the Dress skirt WR should be used, divided between the three darts. This gives 3–4 cm for each dart measured as usual equally each side of the crease and taken down to the raised Hip Line. As the darts are pinned out, the slashes below open to the correct hem width. Outline and re-cut, as usual.

It will be noted that the method is the reverse of the one used for 'straightening' the skirt line.

N.B. Sometimes it is advisable to add more width to the whole skirt pattern, e.g. 0·5 or 1 cm down CF and CB. Check measurement.

The method is often used in pattern designing for transferring smaller amounts into hem, to make it stand away where it tends to cling to the figure (e.g. in the back a 1 cm waist dart can be moved into hem).

MATCHING SIDE SEAMS—of bodice and skirt

The side seams of bodice and skirt are planned independently and therefore the problem may arise of how to make them come together correctly *in dress patterns*.

Basically, the Waist measurement divides itself between back and front more or less equally, though with possible slight variations for *different shapes of figure* and *waist tightness*. In practice, therefore, the ¼ **Waist measurement** (or ¼ Waist minus something) can be taken as a **basis for side seam matching**.

Since in dress patterns both bodice and skirt are reduced to ¼ Waist + 2 or 2·5 cm, it is sufficient to check the back only. Measure the finished back waist from CB to side seam, missing out the W dart and treating the Sl. CB as a dart, to see if it is equal to ¼ Waist or possibly less. Then compare this with the back waist of the skirt, again missing out the dart and measuring to Centre seam. If they match, the side seams will come together; if not, some adjustment may be necessary, e.g. in the bodice pattern a 'reduced' Sl. CB or forward side seam, or in the skirt the use of a side seam to the back of the Centre line or a change in the depth of dart. The deciding factor is the final *appearance* of the run of the side seam depending on the shape of the figure.

In custom work small discrepancies (e.g. 0·5 cm) on individual patterns may be ignored, as adjustment is easy when assembling and fitting; but patterns for mass production must be very accurate and all seams must match perfectly.

N.B. The one-piece dress foundation cut through the waist for a bodice-and-skirt style is not a solution of the problem, as further manipulation of the pattern is generally necessary before a correct fit of the separated skirt and bodice is obtained.

MATCHING WAIST DARTS—of bodice and skirt

When the back of a **bodice has no waist darts** and is either plain, pouched or eased into the skirt, the waist dart of the skirt can be used in its original position, i.e. as it is on the skirt block.

When the **bodice back has one waist dart**, either in its usual position, or moved to go with a Sl. CB (see FIG. 19/III), then *the skirt dart* is usually *moved to match it*. It must be noted, that it is the *inner* lines of both darts (the ones nearer CB) which must come together: the guide lines can match only if the darts are the same size. Generally they are not (e.g. bodice has 2 cm, skirt—3–4 cm waist dart).

When the **bodice waist has more than one dart**, or some fancy dart arrangement, then the skirt dart is either used in its original position or in a way to suit style.

CHAPTER TWELVE

ONE-PIECE DRESS FOUNDATION

The One-Piece Dress foundation consists of a bodice and skirt cut in one without a join at the waist. It may serve as a foundation for cutting various kinds of garments, ranging from simple overalls and dressing gowns to the most elaborate evening dresses and coats.

The One-piece foundation can be obtained either:

(*a*) **by joining bodice and skirt** blocks at the waist, or along the Hip Line; or

(*b*) by adding the skirt part to the hip length bodice **by measurement.**

Although the first method appears to be more logical, in practice it is actually more involved because difficulties arise when matching Waist or Hip Line of skirt and bodice, particularly when the skirt is of the more shaped variety. The use of this method is therefore restricted to special cases, while for all general purposes the **second method**—the adding of the skirt part by measurement—is advisable. It is simpler, though equally correct, and it is the *method described below.*

On a large sheet of paper outline the bodice block to hip level, placing back and front 12–15 cm apart, with CB parallel to CF and the *Hip Lines on the same level* (Plate 30). Continue the CB and CF lines down to a length equal to the required length of the skirt part (the skirt length should be *measured from the waist*).

On this level rule the two Hem Lines, first at right angles to CF and to CB, and later curving them slightly upwards (0·5–1 cm).

Find the basic hem width from the Standard skirt block, measuring separately for the front and for the back as far as the side seam. Measure and mark these widths along the Hem Lines from CF and CB respectively: this determines the position of the side seams of the basic One-piece dress.

From each point thus marked rule the side seam upwards to the bodice, running the line smoothly and without a break into the bodice seam. In avoiding a break in the side seam some width may be gained on the hip level (particularly with wider skirts).

For a tighter hem width measure 2–4 cm less from CB and CF and mark another point *inside* the first one; a seam from here will give the dress a straighter line at the sides. When fashionable, and for suitable styles, the hem width can be reduced even further; it can, for instance, be made to match the hip width, though this is generally suitable only for very close fitting dresses, worn short, or for special style effect.

The seams can also be slanted out slightly more, but in **widening the skirt** in this simple way the limit is soon reached and excessive slanting out usually gives the dress an unattractive, hard, stand-away line at the sides, unless balanced by similar width addition at other points of the hem (which is obviously impossible in a simple style, with just the two side seams).

In a simple One-piece dress, i.e. one with just the two side seams, **extra fullness and hem width** can be added to the skirt part only by means of pleats, godets, inset panels and other style details, which must thus be part of the design. As just stated, too much slanting out of the side seams is not satisfactory because the whole additional width is thrown into the sides, leaving the front and back of the dress flat and with a tendency to fall in at the hem. This difficulty in distributing the hem width (and also the waist suppression) evenly *all round the figure* is a serious drawback in the use of the simple One-piece foundation. It is the reason why at times when more shaped, full-skirted dresses are fashionable, the simple One-piece dress block is less used than when looser lines are popular.

In its simplest shape the One-piece dress foundation is suitable mainly for a variety of garments requiring a looser fit, such as overalls, classical dressing gowns, straight dresses loose at the waist or just pulled in by a belt. The use of waist darts makes it possible to fit such simple styles a little more to the figure. But for **close fitting styles** it is necessary to use not only deeper darts but also **additional seams** which help to mould the dress to the curves of the figure. In this way, the **simple One-piece dress gradually approaches the Princess cut**, which has several vertical seams: these not only help to outline the shape of the figure (i.e. to fit it) but also to distribute the hem width in an even and balanced way all round the figure. Therefore, between the simple One-piece dress and the classical Princess dress (developed from a Panel bodice—see Chapter VI, Plate 11) there are many **intermediate styles**, and many different ways of adding shaping and hem width. The CF and CB seams are frequently used for this purpose.

Another, and even simpler, method of producing a One-piece foundation consists in adding to a hip-length bodice a rectangle down to the required length of skirt; the width equal to hip width of bodice. Final side seams are then ruled *outside the rectangle* according to hem width desired, always adding a little more to the front than to the back. This is **the rectangle method.**

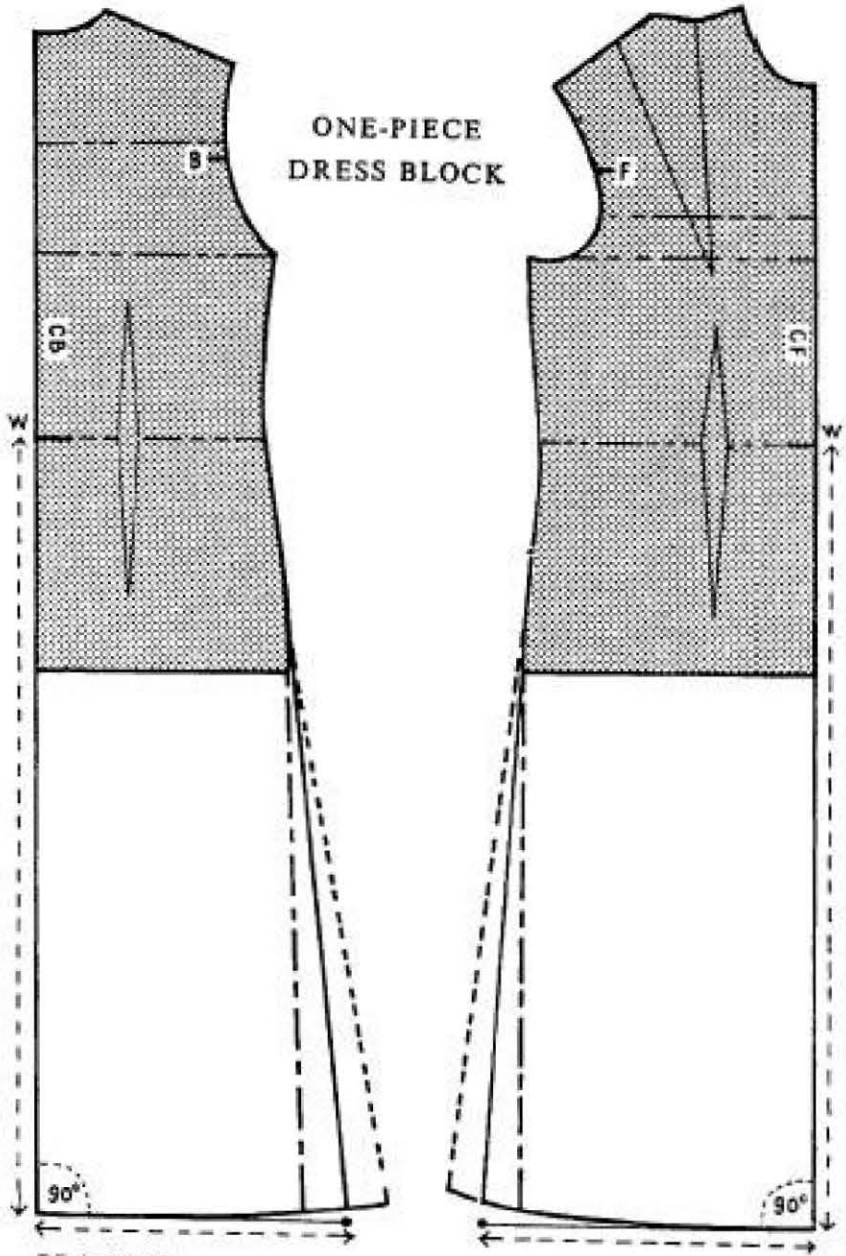


PLATE 30

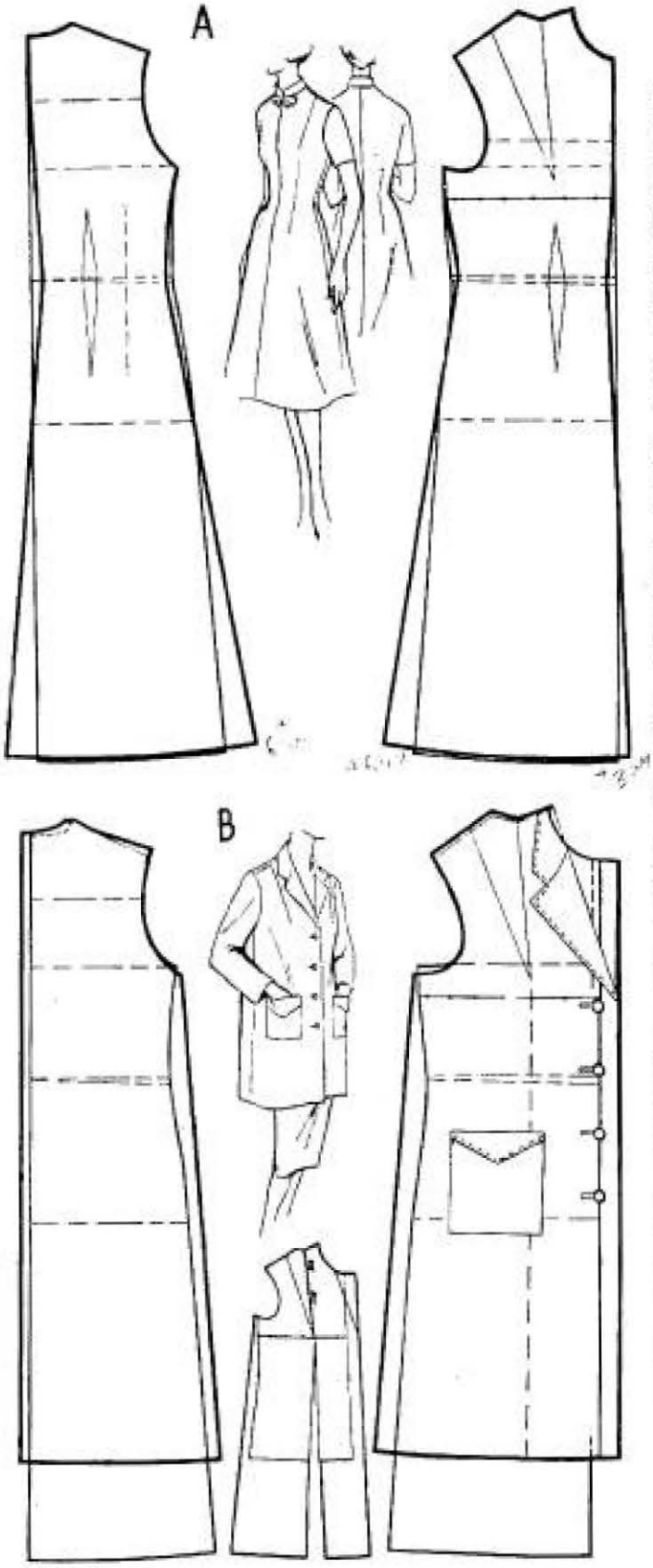


PLATE 31

PLATE 31—ONE-PIECE STYLES

The two examples in this Plate illustrate the use of the One-piece dress foundation for two quite different styles: **one fitting fairly close to the figure** (a simple Princess line); **the other—fitting quite loosely** round the waist and hips, i.e. hanging from the shoulders.

Style A, which may be a simple dress or an overall, has a fairly wide stand-away skirt, produced by adding extra hem width to the standard One-piece dress.

Two additional seams are used—down CF and CB—providing a better means of shaping the dress to the figure and of widening the skirt part.

After outlining the standard One-piece dress block (allowing extra paper on both sides for skirt widening), mark in the bodice part the inner side seams and the Sl. CB and CF, into which the skirt seams will run. Use the waist darts as they are.

To widen skirt, add hem width on every seam, i.e. on CB and CF, as well as on the sides. An addition of 5–6 cm on every seam edge except the front, where 3 cm is sufficient, increases the hem width by 30–45 cm. This added to the standard skirt width of the block gives a hem of about 1½ m or a little over, i.e. the hem width of a Fully Shaped skirt.

If the style is to be used as an overall, worn over another garment, it should, of course, be made looser (5–8 cm), less shaped on side seams and with a bigger armhole (see style B).

The pattern may also be adapted to a style with a narrow skirt (a 'sheath' dress), by reducing hem width to less than that of the standard One-piece dress.

Style B is a ¾-length coat-overall showing the addition of extra width round bust and hips. The side seams are quite straight, and all are drawn outside the One-piece block.

Add 8–10 cm extra width round the bust by allowing 1 cm beyond CF, CB and on all seam edges. The back neckline is re-shaped to the original size.

Add 12–15 cm round the hips to make the 'coat' stand away well from the figure. Distribute this unevenly, marking on the Hip Line level 1 cm beyond CB and CF, 2 (1) cm beyond side seam in the back, and 3 (2·5) cm beyond side seam in the front (this helps to prevent side seam swinging forward). Rule the new CB, CF and side seams through these points to the required length (50–60 cm below the waist).

Lower the armhole 1 cm to increase its size. The SP may also be raised and the shoulder squared for the same purpose. Allow 3–4 cm wrap. Complete the front according to sketch, which shows a simple, i.e. 'basic' rever and shirt collar (see Chapter X, FIG. 12). Plan buttons and pockets.

Sometimes it is desirable to make the fronts swing out a little, adding ease and hem width. This is done by slashing from the lower edge to Bust point (see small diagram) and transferring some of the Shoulder dart into the hem (3–5 cm).

In some close fitting One-piece styles the *inner* shaped side seams of the bodice may be used (though this is not suitable for every type of figure). The Slanted CB and CF, however, should not be used with a plain back and front, but only when the style has an actual CB and CF seam.

There exists a **tighter-fitting One-piece foundation** used mainly for cutting petticoats, which it is possible and often very convenient to use also for close fitting sleeveless dresses with no join at the waist. Such styles, moulding the figure, and often with various fancy lines running *across the waist* (where a join would be in the way), are easier to plan on a foundation *already adapted to a closer fit*.

Such a foundation is usually tighter round the bust (by 4–5 cm) and throughout the whole bodice part. It also has an increased Shoulder dart (by 50% or more) to tighten the top edge of a low-cut neckline or of a strapless dress bodice, or to give a petticoat a brassiere fitting top. All this is possible because these dresses (or petticoats) have no sleeves, and therefore no problem arises with regard to correct *armhole size* and fit.

Most of the styles referred to above are quite elaborate and outside the scope of this chapter. However, the tighter One-piece foundation (or Petticoat block) is mentioned here because in some cases even **simple one-piece styles** require a really close fit and can be **tightened in the same way**, but during the actual style adaptation. Obviously this applies almost exclusively to **sleeveless dresses** (e.g. a simple 'sheath' type of dress with low-cut neckline and no sleeves). In such cases there is no need to prepare and use another, and tighter One-piece foundation, as the required width reduction (0·5–1 cm off the inner side seams) can easily be made while planning and designing the pattern on the ordinary One-piece block.

CHAPTER THIRTEEN

DESIGNING SKIRT PATTERNS

GORES

The simplest designing of skirt styles is based on the **division of the plain two-piece skirt foundation** into a number of sections called 'gores'.

The skirt block is a simple two-piece skirt, and as a pattern it is used to the fold of the material. The same pattern (i.e. the block) can be used for a 4-gore skirt by having CB and CF seams, which divide the plain front and the plain back into two gores each.

The 4 gores can further be folded in half giving 8 gores to the same basic pattern; and these can again be halved so that the 8-gore skirt becomes a 16-gore skirt.

The skirt block can also be divided into 6 gores, and these further subdivided into 12. The 6-gore skirt is usually known as the **'Panel skirt'**—a well-known *basic pattern* from which a variety of other skirt designs can be produced.

In principle, each skirt foundation (the Standard, Straight or Fully Shaped) can be divided into any number of gores, and these may be equal or unequal. Thus, with all the possible changes of 'line' or foundation, quite a range of styles is already obtained by this simple method alone. In actual practice, some lines are more suitable for styles with many gores (e.g. the stand-away line of the Fully Shaped block); others for skirts with a small number of gores.

The variety of skirt styles produced by simple division into gores can be further increased by the **addition of extra fullness between the gores**, by a different use of the grain of the fabric (e.g. true bias or crossway skirts), by the addition of hip yokes of all shapes and sizes, and by many other trimming details.

ADDING FULLNESS TO THE GORES

When a skirt consists of several gores it can be made much fuller round the hem by simply adding width in the seams, between the gores.

The width can be added from any level: from Yoke Line, Hip Line, Knee Line or from half-way down the skirt length. It all depends on the style and prevailing fashion, and the effect is different in each case.

The addition is made by drawing a wedge-shaped piece on the side of the gore, giving it the required width at the base and starting it from the level which the design seems to indicate, e.g. from hip level or half-way down the skirt, or knee level. Thus, taking as example a 4-gore skirt, 8 cm may be added at the hem on each side of each gore, making the hem of each gore 16 cm wider. The total addition is 64 cm, and thus the hem of the whole skirt is 64 cm wider than the hem of the block.

According to what the style suggests or what fashion requires, the addition will run off to nothing on or below the level of the hips. The line, however, should always be taken a little higher than the sketch seems to indicate, as the fullness cannot develop from the highest point, but only from a few cm lower. The new line must run smoothly into the seam of the gore and, to avoid a sharp angle, it is generally curved a little.

When interpreting a style with gores requiring extra hem width, the method is to decide first of all how full the finished skirt should be, i.e. *how much more the final hem should measure than the block*. For instance, the Standard block measures between 115 and 125 cm round the hem. To obtain a 4-gore skirt with approximately 2 m round the hem, it is necessary to add at least 70–80 cm more. Divided into 4 (4 gores) this gives 18–20 cm per gore, and thus 9–10 cm must be added to each of the eight edges.

The total width added not only varies for different styles but it *may also be unequally divided* between the different seams of the skirt. There are styles where more fullness is added in the front seams than in the back, or vice

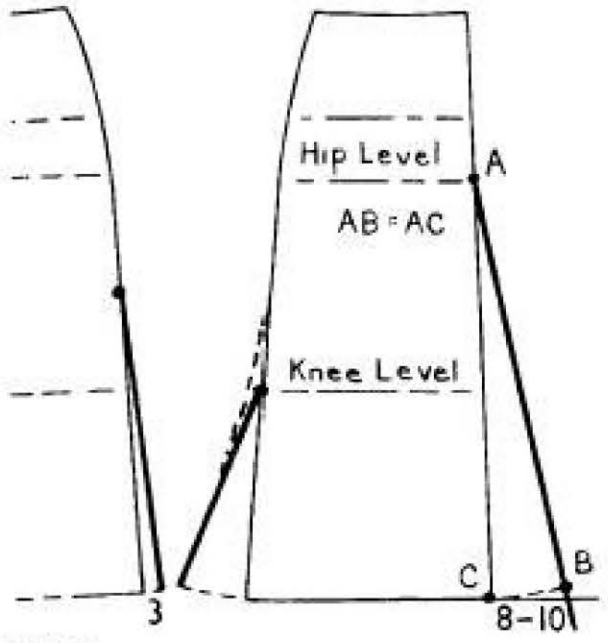


FIG. 1/XIII

versa; or where most or all of the extra width is concentrated in a few seams or even in one seam only. All these details and variations must be carefully noted when studying the sketch.

On the pattern, the extra width beyond the gores is obtained either by pasting strips of paper under the edges (e.g. CF, CB and the sides in a 4-gore skirt), or by allowing extra paper when outlining the block (the front and back can be outlined separately, each with its addition). On this extension the extra hem width to be added, e.g. 8 cm, is measured, and from here a line is ruled up to meet the edge of the gore on the level required (FIG. 1). The length of this new line should be equal to the length of the former edge of the gore (AB = AC, in FIG. 1), and this causes the hem extension to go up slightly. When the final pattern is cut, the new seam line can be curved a little to run more smoothly into the edge of the gore.

Establishing the width addition of the gores according to style, number of gores and final width required needs experience and judgement, but these are soon acquired with practice. It is important, for instance, to learn *what the different skirt widths look like* on the figure (or in a sketch); to know the fashion trend of the moment, as represented by the *skirt width most usually worn*; to find out what the *generally accepted width* is for various types of skirt, e.g. for evening wear, different sports wear, etc. All this is of great help in skirt designing and should be studied in a practical way, by measuring hems, noticing their appearance on the figure and by comparing them with the 'line' and hem width of the various skirt blocks.

SHAPED HIP YOKE

A shaped Hip yoke may be part of a gored skirt as well as of any other skirt style—pleated, gathered, flared or plain. It appears in a variety of shapes and sizes, but basically it is the *top of a skirt* fitted to the waist *without any visible darts*. It may be quite a separate piece joined to the lower part of the skirt on a simple horizontal or a fancy (pointed, curved, slanting) line. Or it may be cut in one with a section of the skirt, for instance attached to a Panel or Side gore, thus avoiding a join all round the figure. Even so, any darts which would normally appear in this part of a skirt are eliminated, so that a yoke is usually dartless except for the concealed side seam dart (there are a few exceptions, such as all-round darted or gathered yokes).

The depth of a Hip yoke need not always come to the usual level indicated on the skirt block, 15 cm below the waist: it may be higher or lower according to the style and the fashion of the moment. The *height of the figure* must also be taken into consideration: this is an important point in skirt designing, for Hip yokes must be in correct proportion to the skirt length worn. A Hip yoke which is too deep will cut the figure in the wrong place and might have the effect of increasing the size of the hips. The Hip yoke should always be visualized as a *proportion of the total skirt length* ($\frac{1}{4}$, $\frac{1}{5}$ or $\frac{1}{6}$), and this may vary with fashion.

The top of a Fully Shaped skirt is already a shaped Hip yoke. In the Standard or Straight blocks the top of the skirt must be converted into a flat-fitting yoke by eliminating all visible darts. It is only with these blocks therefore that the problem of making a special pattern for Hip yokes arises.

The Hip yoke is outlined on the Standard skirt block to the required depth (FIG. 2).

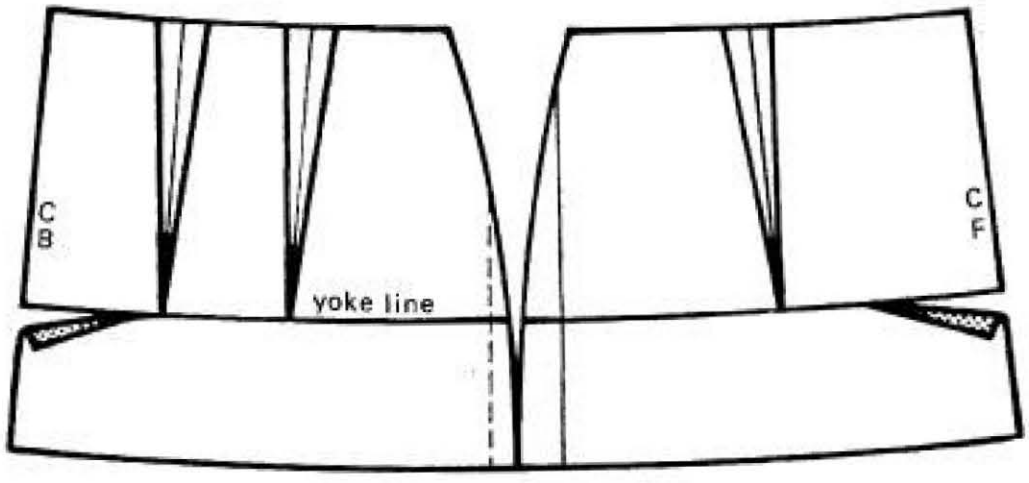


FIG. 2/XIII

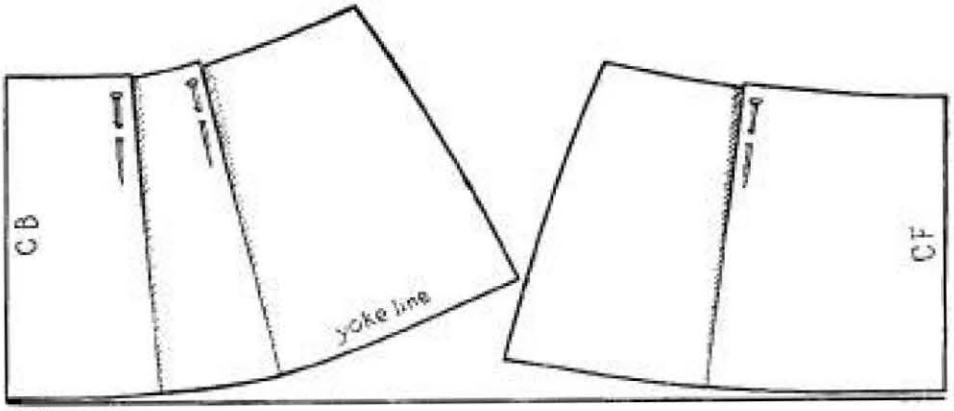


FIG. 3/XIII

The darts are drawn down to 15–18 cm below the waist, even if the yoke is to be made shorter; but they are taken down to the lower edge if the yoke is deeper (compensating on the side seam, if necessary).

After cutting away the yoke and separating it on the side seam, all the darts are closed. In the back it is advisable to use two darts, even in dress skirts (making them smaller), as this distributes the shaping better. The yoke is then *re-cut without the darts*, rounding off the lines into smooth curves.

When a yoke is cut in one with a skirt section the whole pattern is usually cut out first, before the yoke part is darted.

PANEL SKIRT—Plate 32

The classical Panel skirt consists of 6 gores of equal width. In more fancy Panel skirts the shape and width of the front (back) Panels and of the other gores (called Side front and Side back) may vary considerably. However, the division into 6 *equal* sections gives a very useful *basic style* from which a variety of other Panel skirts can be easily planned.

After outlining the skirt block, measure and mark from the CF along the Hip Line the distance to the Centre Line of the skirt (Y–Z). Mark point P at one-third of Y–Z (from CF). For a 52 cm Hip width Y–Z = 26 cm and one-third of that = 8·5 cm for point P. Repeat the measuring to the middle of the skirt along the Hem Line and again mark one-third of it from the CF for point P. Through these two points (P) rule the **Panel seam**. This gives the *half-pattern* of the front Panel, which will be placed *to the fold of the material* to obtain the whole Panel. Trace it through to the back, folding the pattern lengthwise through the middle, or repeat the measuring as for the front. Draw balance marks on Hip level.

N.B. Where YZ does not divide equally into 3, the side gores can take any surplus.

A re-arrangement of the Waist darts is necessary. As there is a seam in the front—the Panel seam—a 2 cm dart can be taken out in it. In the front Panel seam the part is usually taken out entirely on the Side front edge: the Panel line remains straight, but may sometimes be sloped at the top.

In the back, a similar but deeper dart is taken out in the back Panel seam, usually 0·5 cm off the Panel itself and 2–2·5 cm off the Side back. The remaining waist surplus is taken out in a second back dart usually placed in the middle of the Side back gore.

After cutting up the pattern into front and back half-Panels and Side gores, **mark the Straight Grain** on Side front and Side back *by folding them lengthwise through the middle* (i.e. at right angles to the Hip Line).

It will be easily understood that the shape, i.e. slope, of the Panel and side gores will depend on the line of the skirt block used: the more shaped it is, the more shaped each gore will be (and even a circular skirt can be used for a Panel style). With a Fully Shaped block the gores will be almost twice as wide at the hem as at the waist (see Plate 29).

There are many variations of the classical Panel skirt and it is the *basic pattern* of quite a big range of styles. The gores may have additional hem width added to them (as described earlier in this chapter). Different pleats, as well as inset sections, can be used in the seams. The width of Panels may be varied by moving Panel seams in or out in relation to CF (e.g. to match a bodice seam). Even the slope of the Panel seam can be changed to suit a special style or fashion. All these variations are quite easy to plan if one bears in mind the classical division into 6 equal sections. The Panel Skirt is, in fact, one of the most versatile basic patterns.

By dividing each gore in half the Panel skirt becomes a 12-gore skirt (Plate 33).

N.B. No notice should be taken of the *position of the side seam* in the various illustrations of skirt styles in chapters XIII and XIV. Whatever its position—on the centre line or 2 cm forward—this is irrelevant to the instructions given for *the interpretation of the style*.

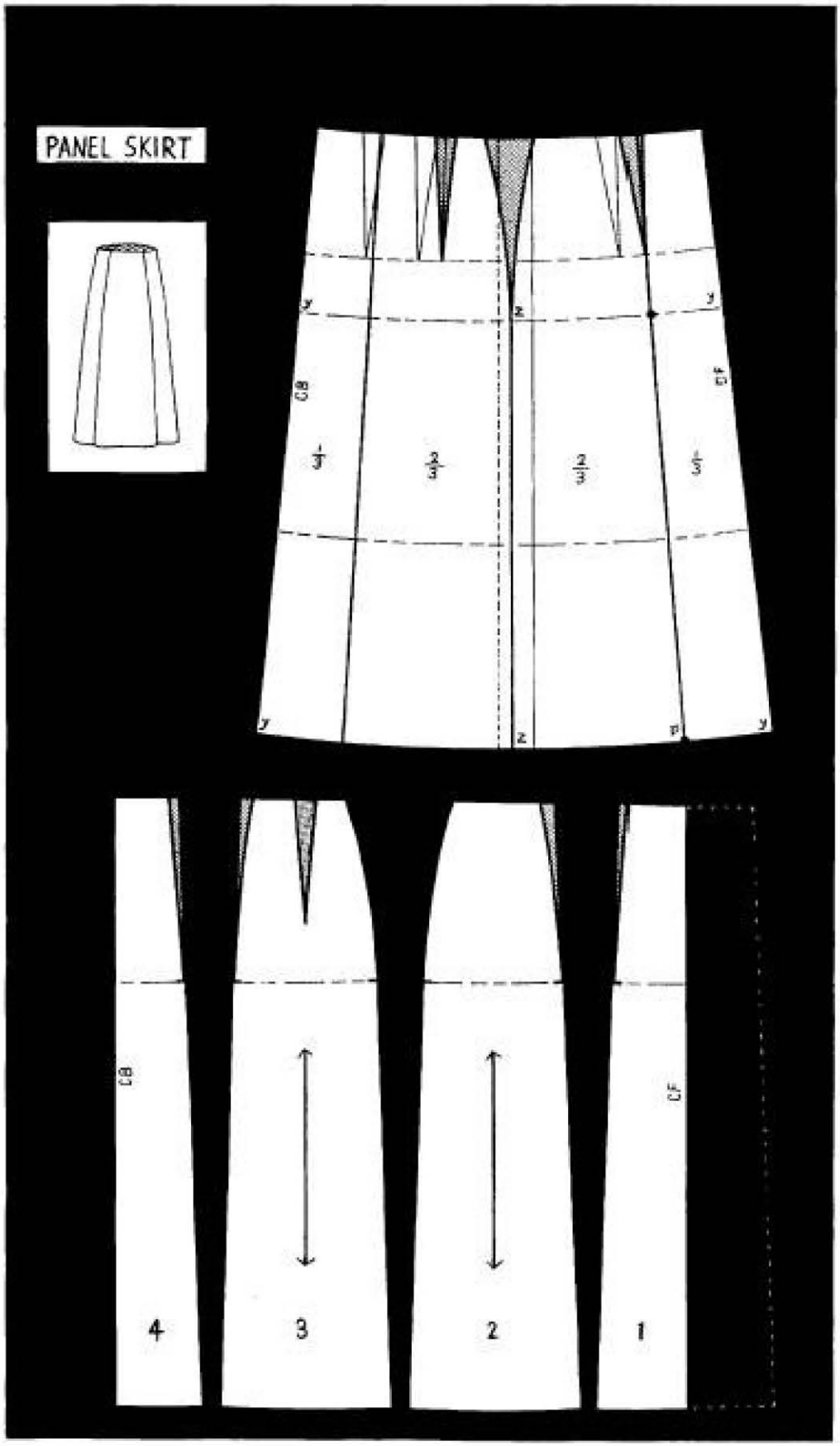


PLATE 32

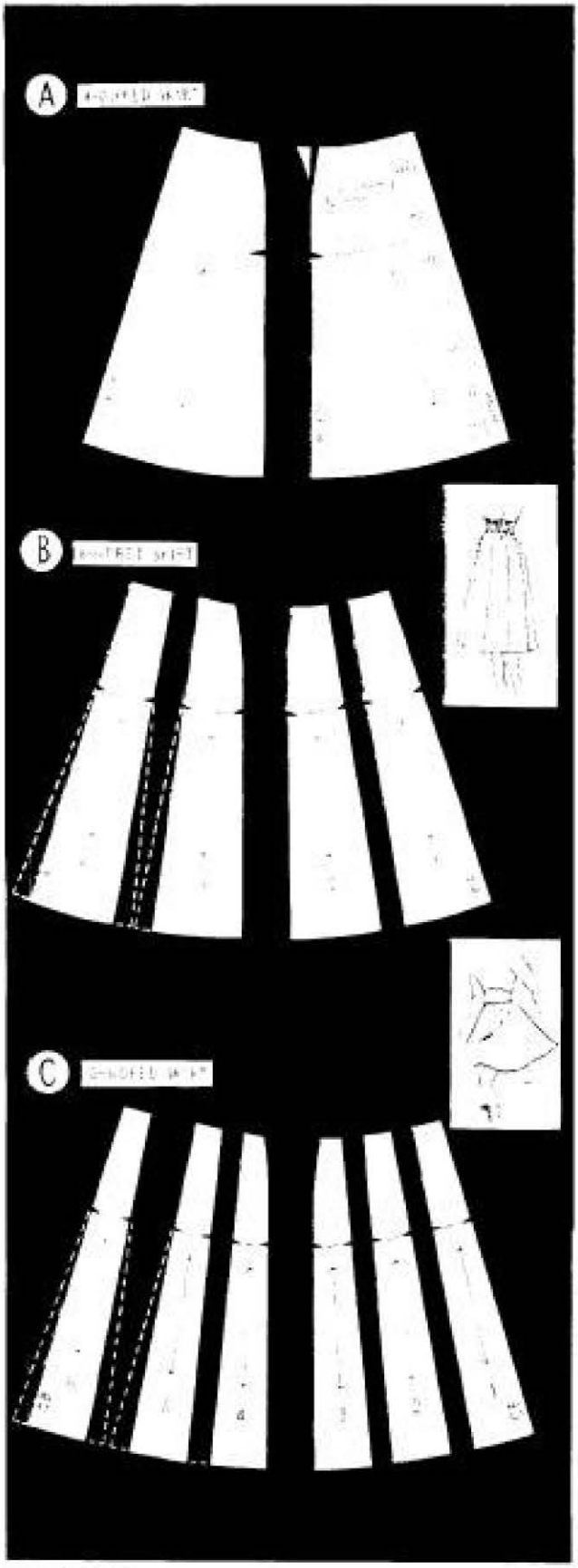


PLATE 33

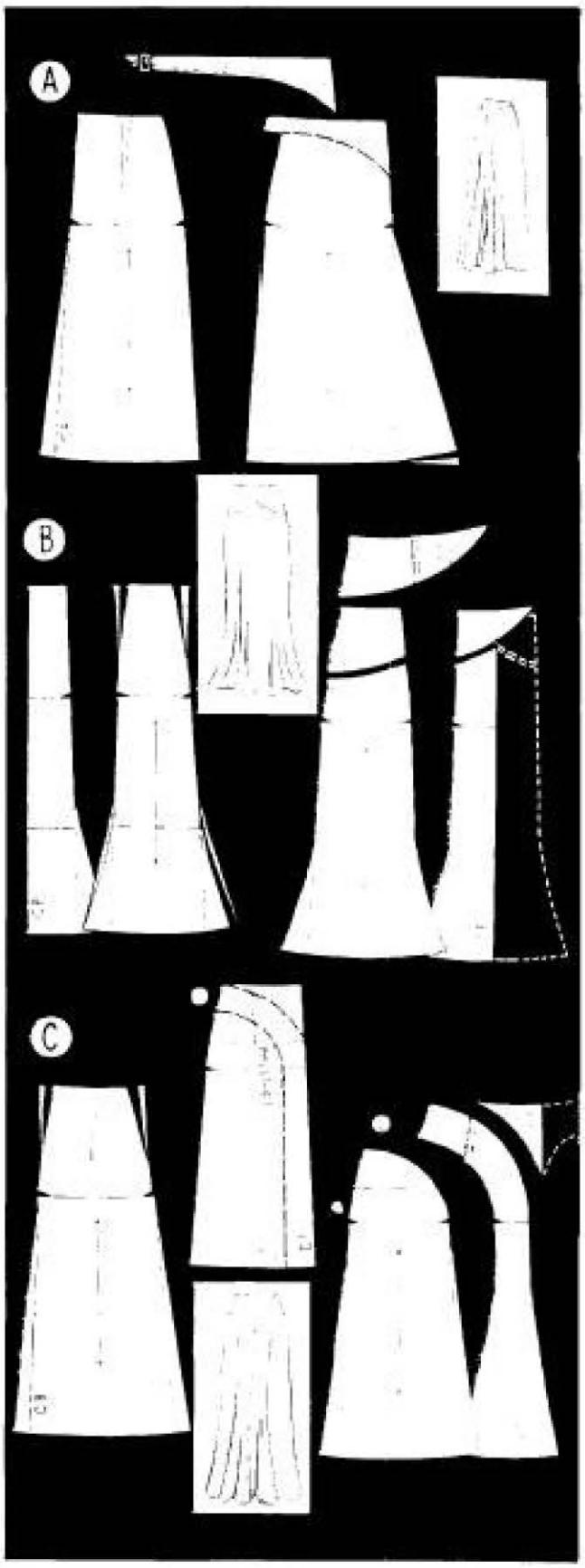


PLATE 34

PLATE 33—SIMPLE GORED SKIRTS

All the skirts shown here are cut on the Fully Shaped block which is a more suitable foundation for styles consisting of more than 6 gores (see also Plate 29 in Chapter XI). While the 4-gore and 6-gore skirts may be straight, shaped or full, the 8-gore and 12-gore skirts are nearly always full. They are used mainly when wide skirts are fashionable, but are always popular for sports wear (e.g. skating, etc.).

Style A is a **4-gore skirt** which instead of a CF seam has buttons down the CF and so needs a wrap (min. 3–4 cm). When outlining the front, place the block 4 cm from the edge of the paper to allow for the wrap. The facing can be cut separately or in one with the front and should be at least 4 cm wider than the wrap, i.e. 7–8 cm to allow for buttonhole facing. Usually it is simply allowed for when cutting in material, like turnings, and so need not be included in the pattern.

Since this is a Fully Shaped skirt, it will have a small dart in the side seam when used as a separate or 'tailored' skirt. It may have an additional small dart on the CB if necessary for the waist fit. As a Dress skirt it would have no darts anywhere and all the seams would be straight (the block just *fits* a dress bodice, or can be made to do so).

Mark the **Straight Grain (SG)** on the pattern: in the front to follow the CF, because of the buttonholes; in the back—down the *middle of the gore*, as this improves the hang of the skirt. There is little point in having a seam down the CB unless one makes use of this to achieve a better-balanced line, with the skirt standing away *more evenly all round the figure* (not *flat* at CB and *out* at the sides, as would be the case if the CB were on the Straight Grain).

Style B—an 8-gore skirt—is obtained by cutting each gore of a 4-gore skirt in half lengthwise. After tracing off the front and back of a Fully Shaped block, fold each part through the middle, as when establishing the Straight Grain. Slight inaccuracies which may occur in folding can be disregarded. The Quarter-circle pattern (Chapter XVI), also used for this style, has this advantage over the Fully Shaped block that, being geometrically correct, it folds into a number of equal sections quite correctly, while this block is individually shaped and not necessarily a true part of a circle.

Extra hem width (over the 160 cm of the block) can be added from the hip level or lower (broken lines). The SG is again marked down the middle of each gore.

Style C is a **12-gore skirt** cut from a 6-gore skirt by dividing each gore in half. This actually involves dividing the Side front and back only as the Panels are already half-patterns. As with all Fully Shaped skirts, a small dart would be used at the side to fit skirt into a tight waist. The SG is in the middle of the gores.

In these styles the hem width is often increased to about 2¼ m, but because of the number of gores (12 seams = 24 seam edges) the addition on each gore is usually quite small, i.e. 3–4 cm.

PLATE 34—MORE ELABORATE GORED SKIRTS

These gored skirts have more elaborate style details, and the extra hem width is added in a different way.

All the styles are cut on the Standard block, but a Straight block could also be used when fashionable. A Fully Shaped block would not be suitable, however, as the special style effect of *concentrated* hem fullness appearing at a definite point or from a low level would be lost in a wide skirt: the right style and line emphasis can be achieved only if the skirt itself has little or no fullness.

Style A is a 4-gore skirt with considerable addition of hem width in the CF only. A minimum of 10–12, but usually 13–15 cm, would be necessary to produce the 'flares' in the CF seam. The fullness must be added from a fairly high level as it does not develop until a few inches below that level. The line should be curved slightly, especially with a bigger addition (see 'Side flaring', Chapter XV).

The small amount added on the CB is merely to ease the fit of the back, i.e. to make it less clinging in soft fabrics (see also style C). However, a clinging back is often suitable for such a design, and in that case a plain, seamless back (with SG down CB) would be used.

Style B is a 6-gore skirt with a yoke in the front only and with additional hem width added evenly in all the seams, but from a very low level—the Knee Line.

Plan a Panel skirt in the usual way and re-arrange the waist darts. Outline the Hip yoke before cutting the skirt into gores. Since the yoke crosses over to the other side of the Panel, some extra paper must be allowed beyond the CF, at least at the top. After removing the yoke, any unnecessary paper can be cut away to the CF line of the Panel.

After separating the gores, add from just above the Knee Line extra hem width equally on each seam edge. Curve the lines slightly, running them smoothly into the seams. Mark SG down the middle of each gore. Add 5–7 cm on every edge.

N.B. If the addition on the two edges is made *unequally* e.g. 8 and 4 cm, the seam can be concealed by the 'flare'.

Style C has a simple back with a CB seam but a more fancy design in the front which, however, it is convenient to plan as if it were a Panel. The *two* narrow 'panels' ending in flared fullness at the hem (i.e. in *Side flaring*) appear to be narrower than the classical Panel. Therefore mark their width *inside* the usual Panel Line (which is often indicated on the block). Curve this narrow Panel at the top to follow the sketch.

After *checking the style lines* on the stand or against one's figure in the mirror, cut the front and add the extra hem width to the edges of the narrow panel (8–10 cm). Mark SG down the middle. Close small dart at the top.

The small addition of hem width on the sides and on the CB is to prevent the skirt clinging to the figure, which it particularly tends to do in dresses made of soft fabrics. Such a small addition gives a more flowing line to the skirt, without necessarily making it look full.

CHAPTER FOURTEEN

FULLNESS IN SKIRTS

PLEATS—FOLDS—GATHERS

In skirt designing the addition of extra width or fullness plays a very important part. Skirts are often just straight pieces of material of considerable width, made to fit the figure by pleating, gathering or draping.

As already shown, a skirt foundation is basically a rectangle which, however, can be given shape by reducing width at the top and increasing width at the hem. It will be easily understood therefore that any of the stages in this transformation (see Plate 28) are possible skirt foundations—the rectangle itself, as well as its various adaptations. For many national costume skirts the rectangle is the only foundation.

Indeed, there are times when the simple rectangle is a most suitable block, if not for all, at least for many of the current fashion styles. And at all times the rectangle is important for styles of skirts which have much extra fullness throughout their whole length, i.e. round the waist, round the hips and in the hem (pleated skirts, gathered skirts, etc.).

As distinct from the skirts considered so far, which, whatever their line and style, all have definite and controlled fitting allowance of 5–7 cm round the hips, these fuller skirts have no fixed allowance, except when occasionally the extra fullness is caught down and held flat round the hips and higher (e.g. stitched pleats). The amount of fullness used in these styles, therefore, depends mainly on the silhouette to be achieved and on the *method* of controlling the fullness, i.e. by pleating, gathering or folding (real draping, which is a more elaborate way of 'folding', is not considered at this stage).

The basic methods of adding extra width or fullness to skirts are similar to those described for bodices, i.e. cutting up the pattern and introducing extra width as and where necessary. When, however, the addition is considerable, and moreover, made in such a way that the final pattern is a straight or almost straight piece, then it is obviously more convenient to start from a rectangle of the required size, usually joining two or more widths of material to obtain the total width needed.

The cutting of such skirts, as far as the pattern is concerned, is certainly very simple; but considerable calculations may be involved in the planning and arrangement of the fullness, e.g. pleats.

PLEATS

The **basic pleat** is known as a **Knife pleat**. Two Knife pleats turned outwards form a **Box pleat**, turned inwards —an **Inverted pleat** (FIGS. 1, 2, 3). Since two adjoining Box pleats form an Inverted pleat *between them*, it is not always easy to differentiate between these pleats in a sketch, and the two terms tend to overlap.

A pleat has *three layers*: an outer, middle and inner. The outer layer is always part of the skirt pattern, and only two layers (sections) have to be introduced into the

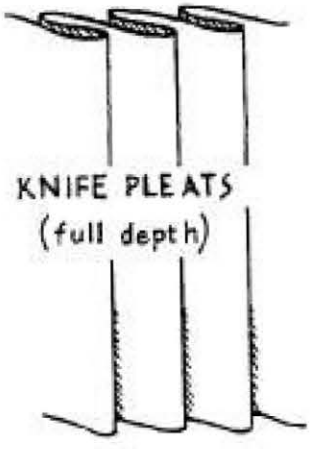


FIG. 1/XIV

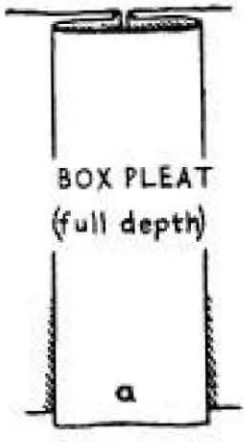
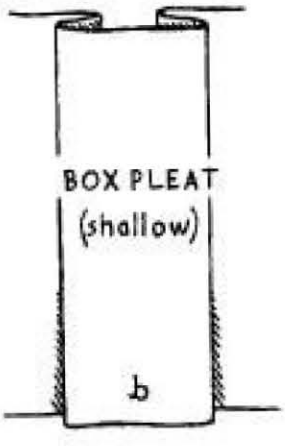


FIG. 2/XIV



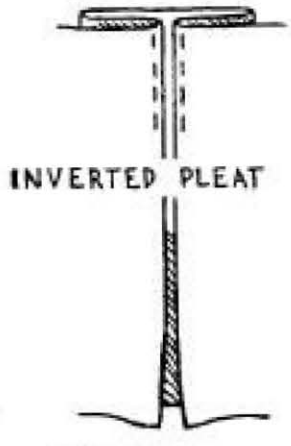


FIG. 3/XIV

pattern to form a pleat. For the Box pleat and Inverted pleat the number of sections is double: but it is generally easier to think of these 'double' pleats in terms of the two Knife pleats of which they are made up.

The two *edges or folds of the pleat* are also known as outer (the visible fold) and inner (hidden inside).

A pleat may be a *full depth pleat* (same inside as outside) or a *shallow pleat*. Thus a 10 cm Box pleat may consist of two 5 cm Knife pleats or of two 3–4 cm Knife pleats (i.e. inner folds are *not touching*—FIG. 2/b).

Finally, from point of view of cut one can distinguish two types of pleat: the Straight and the Shaped.

The Straight pleat is the same width (or depth) all the way down, so that in cutting it an equal width is added to the pattern edge from top to bottom.

The Shaped pleat, inside, is narrower at the top than at the bottom, and so less is added at the waist than at the hem (usually only about half).

Straight pleats, though obviously originating from a straight skirt, can nevertheless be used with different foundations and often appear in *shaped* skirt styles as groups or 'panels' of narrow pleats. Shaped pleats are used mainly, though not exclusively, in shaped skirts.

It is difficult to give definite rules as to when each type of pleat should be used: many things, such as fabric, length of skirt, fashion, have to be taken into account. In some cases either pleat would be suitable, and only minor details influence the choice.

Generally speaking, *Straight pleats* are used more often for straight or slightly shaped skirts, as well as *for shorter skirts*. Since they tend to open out at the bottom more than shaped pleats, the less they come below the knees—the better. Straight pleats are also suitable for single or groups of pleats set into a skirt half-way down or lower. They are easy to fold, to press and to handle. They usually need less joining, and so are often more economical.

Shaped pleats are more suitable for shaped skirts, as they are better balanced than straight pleats and hang (i.e. stay in) better. They are suitable *when skirts are worn longer*, or for *long* single pleats. They are more difficult to handle, as the edge is not on the straight grain and easily stretches. They generally need more joining in order to keep all pleats on the same grain.

Pleats do not always hang loosely, i.e. opening out from the top, but are often stitched down or caught together for some length. When this happens, it is not necessary for the inside layers of the pleats to go all the way up, and they can be cut away to avoid bulk or for economy (see Plate 36). Such cut-away pleats, except when very short, should be supported inside so that their inner edges do not sag, causing the pleat to hang badly. There are different ways of doing this: stitching across top of pleat; catching it to inside of skirt; supporting it by a lining, etc.

Pleats are sometimes left unpressed, with the outer edges 'round', and are then described as **unpressed or round pleats.** They are usually planned in the same way as ordinary pressed pleats, but are really deep, evenly spaced *folds*, rather than pleats.

The joining of pleats can be done on the inner fold, the seam helping the hang of the pleat; or 2–3 cm away from the inner fold, in a flat open seam. Joins should be handled with care or they may upset the hang of pleats.

All-round pleated skirts are either straight or shaped, the latter being frequently cut from a Circular pattern (Plate 37). A straight pleated skirt is best planned directly in material, cut and joined (before or after pleating) to the required total width which is usually *three times the hip measurement for full-length pleats*, irrespective of their outer width. The width of the pleats, however, must be planned, as near as possible, to fit comfortably into the hip measurement, e.g. twelve 8 cm pleats for a 96 hip measurement; twelve 8·5+ cm or thirteen 8 cm pleats for 104 hips, etc. In fact, the planning of a pleated skirt may need some working out and, bearing in mind variations in thickness of material and in depth of pleats (full depth or shallow), the basic rule of three times the hip width is followed only approximately and is often varied, i.e. reduced.

The top of a pleated skirt is fitted into the waist by *overlapping the pleats above the Hip line*. A little easing into the waistband is also often possible.

If a pleated skirt is to be stitched down fairly low it must have at least 2–3 cm extra ease round the hips.

Hip yokes are often used to overcome the difficulty of fitting pleated skirts into the waist measurement.

FOLDS

The simple folds made at the waist of a fairly full skirt (straight or shaped) are very similar to 'round' pleats as far as waist planning is concerned, but they are usually planned only a few inches down and *not through the whole length of the skirt*. At the waist the correct width for the folds must, of course, be allowed, but this extra width need not continue down, and the folds may become more shallow or even disappear completely towards the hem. These skirts are therefore usually less wide than real pleated skirts.

GATHERS

All-round gathered skirts may also be straight or shaped. They may be quite narrow in the hem (e.g. twice the waist width), or quite full, with three times the hip width or more to gather into the waist. Straight skirts soon become too bulky for the waist while still only moderately full round the hem. In such cases a *shaped* foundation is more suitable, and the Standard skirt block, used twice, makes a good gathered skirt.

Gathers can be introduced into skirts in sections, i.e. as gathered gores or panels. These may also be straight or shaped, according to the effect desired (see Plate 38).

PLATE 35—PLEATS IN SIMPLE SKIRTS

The addition of **Inverted and Box Pleats** is shown on the simplest style of skirt—the ordinary 4-gore skirt—which is just the block used with seams on CB and CF. A pleat may be added to CF (CB) only, or to both seams. This may also be a 3-gore skirt with a seamless back.

Style A can be cut with either a straight (FIG. 1) or a shaped pleat (FIG. 2). On the outside the appearance is similar. The difference is in the hang of the pleat. When outlining block, place it at the correct distance from the edge to allow for the pleat, the depth and type of which is thus decided before the block is traced.

For *a straight pleat* (FIG. 1) the *two* inner sections (or layers) of the Knife pleat (half of the Inverted pleat) are measured from the edge of the paper before outlining the block. They are, of course, the same width right through (6–8 cm). This pattern can be used 'to the fold' so that the whole front with the full pleat is cut without a join. Any seam used for economy would be on the SG, often in the middle of the pleat.

For *a shaped pleat* (FIG. 2) it is better to measure from the edge *one* section of the pleat only, cutting the second later, together with that of the other side to form a complete 'backing piece'. Measure 7 (8) cm at the hem and a little more than half of this (4 cm) at the waist. After ruling the pleat line, place the skirt block to it and outline. Mark SG down middle of gore: this will bring the fold of the pleat slightly off the grain. Then place the pleat section only on double paper (to the fold) and trace round it for a separate 'backing piece', i.e. the *two inner sections* of the whole Inverted pleat *cut in one*, and with SG running down the middle. This 'backing piece' is joined to the rest of the pleat by two inside seams which are slightly off the grain.

If this pleat were cut all in one with the rest of the front (i.e. without seams), the pleats, and the skirt itself would be very much off the grain and would hang badly.

Style B is the same style cut on a Fully Shaped (or on a Circular) block. It has a shaped pleat 9 cm wide at the hem, i.e. more than double the width at the waist (4 cm), to follow the greater sloping out of the skirt block. Mark the SG down the middle of the gore.

If the style is to be cut on the true bias, then the SG is marked at an angle of 45° to the usual SG line and the *middle* of the gore is then on the true bias (a 45° angle set square can be used for this purpose).

Style C has two 10 cm Box pleats (forming Inverted pleat on CF). The pleat is outlined on the pattern, cut away and placed on new paper 10 cm from the edge to allow for 2 sections of Knife pleat (as in A, FIG. 1). The same width is added on the other side for the second Knife pleat, which completes the 10 cm Box pleat. The rest of the skirt is then added and the whole outlined and re-cut to CF (in the diagram the part beyond CF is merely explanatory). Extra paper for pleats can also be *pasted to the edges* of cut pattern (to avoid re-cutting later and to save paper). As the pleats are straight, the pattern may be cut all in one without a seam.

PLATE 36—PLEATS IN PANEL SKIRTS

This Plate illustrates the addition of different pleats to a Panel skirt. Style A has **Knife pleats**; style B—**Inverted pleats**; style C has a **Panel of narrow pleats** (there are actually 8 pleats, but only 6 show as a Panel—2 are concealed by the Side front edges).

All the styles are cut on the Standard block, but could also be cut on the Straight or the Fully Shaped foundations (the latter is less usual for style C). The pleats would then be either quite straight or even more shaped than the ones shown here.

For style A, after separating Panel from Side front, add a Knife pleat in the usual way, i.e. one section to each of the two edges. The pleat is graded from 4 to 7 (8) cm at the hem. The part beyond the CF is shown in the diagram only, to make Panel and pleat construction clearer. The pattern itself would be cut to CF.

For style B—with Inverted pleats—*add one section* to each of the two edges (as in A), then cut a separate 'backing piece' equal to the two inner sections, to be joined as explained for style A in Plate 35. The *seam inside the pleats* will help them to stay in.

Alternatively, *add two sections* to each of the two edges, and either cut away the two outer sections to join them into a separate backing piece, or use pattern as it is, with a seam in the *middle* of the Inverted pleat.

The pleat may be used to its full length, or the top part may be cut away to reduce bulk. However, the pleat must always be *planned to its full length first*, in order to get the grading (sloping) of it right by measuring its width, as usual, at the waist and hem. The level at which it is cut is influenced by style, fashion and personal preference, but 25–30 cm or halfway up is usual.

It must be noted that when pleats are shortened in this way it is possible to use less material. A well-known Lay consists in placing the whole Panel in the middle of *double* material and the two Side pieces; *reversed*, at each side of it, with tops of shortened pleats almost touching, i.e. with just enough for turnings between.

As already stated, shortened (cut-away) pleats should be supported inside in some way to hang well.

Style C shows a panel of narrow Knife pleats set into the front, the top of which forms a kind of yoke with buttons down CF. Plan the style as a 15 cm-Panel skirt, divide the half-Panel into 3 (2·5 cm) pleats; the 4th pleat is under the Side front edge. Cut and lay the strips on new paper and make the necessary addition of two straight sections between each of the 3 'pleats', as well as each way beyond them, to form 4 pleats in all.

All pleats are on the Straight Grain, including the one under the Side front. Thus SG marking must be parallel to CF and not through the middle of the gore.

Note that the part above the pleats—the yoke—must have a small wrap for the buttons, and that it cannot be 'shaped' *in the pattern* by a small dart (as indicated in the basic method, Chapter XIII, FIGS. 2, 3), as the CF must remain on SG (parallel to the pleats), because of the buttonholes. An actual small dart may, however, be used later in the skirt itself, if necessary.

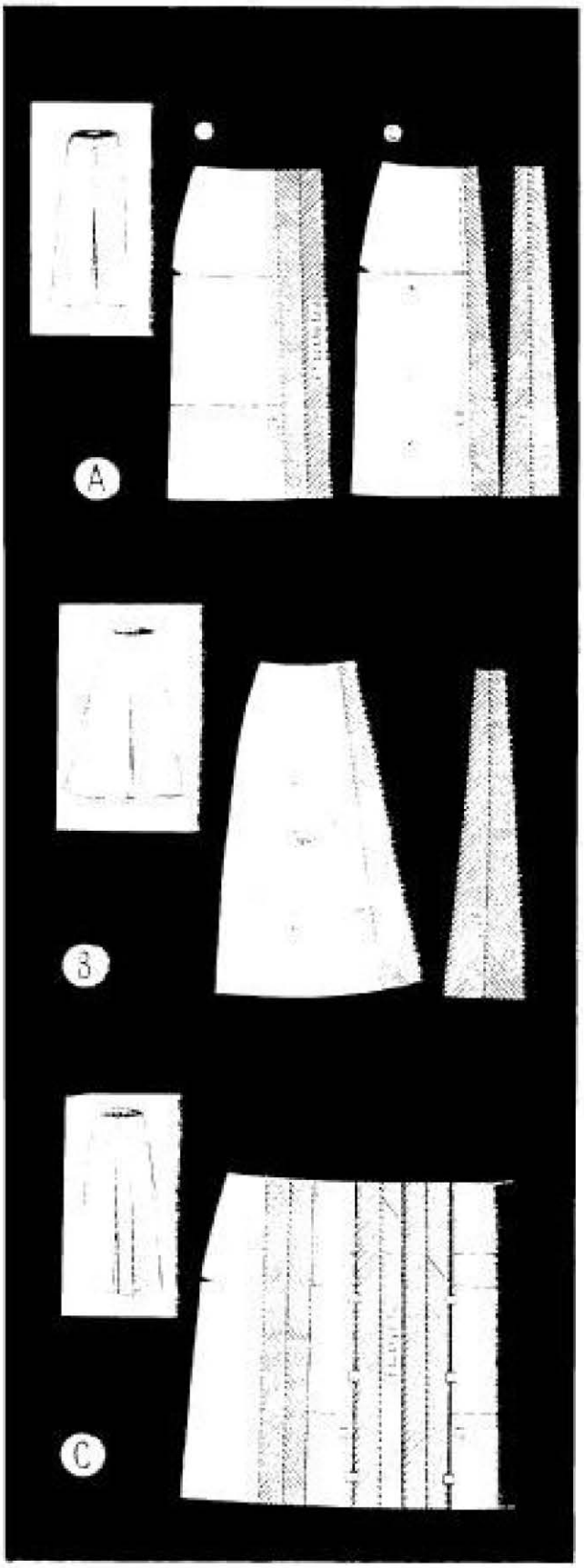


PLATE 35

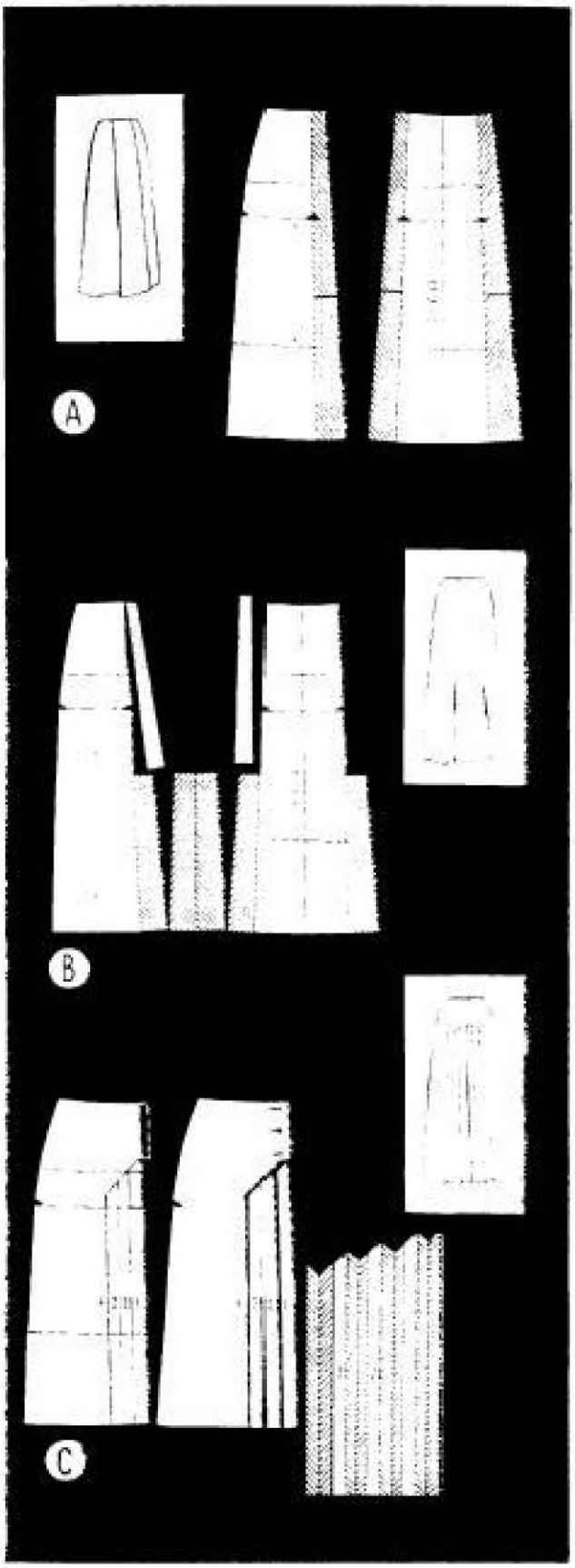


PLATE 36

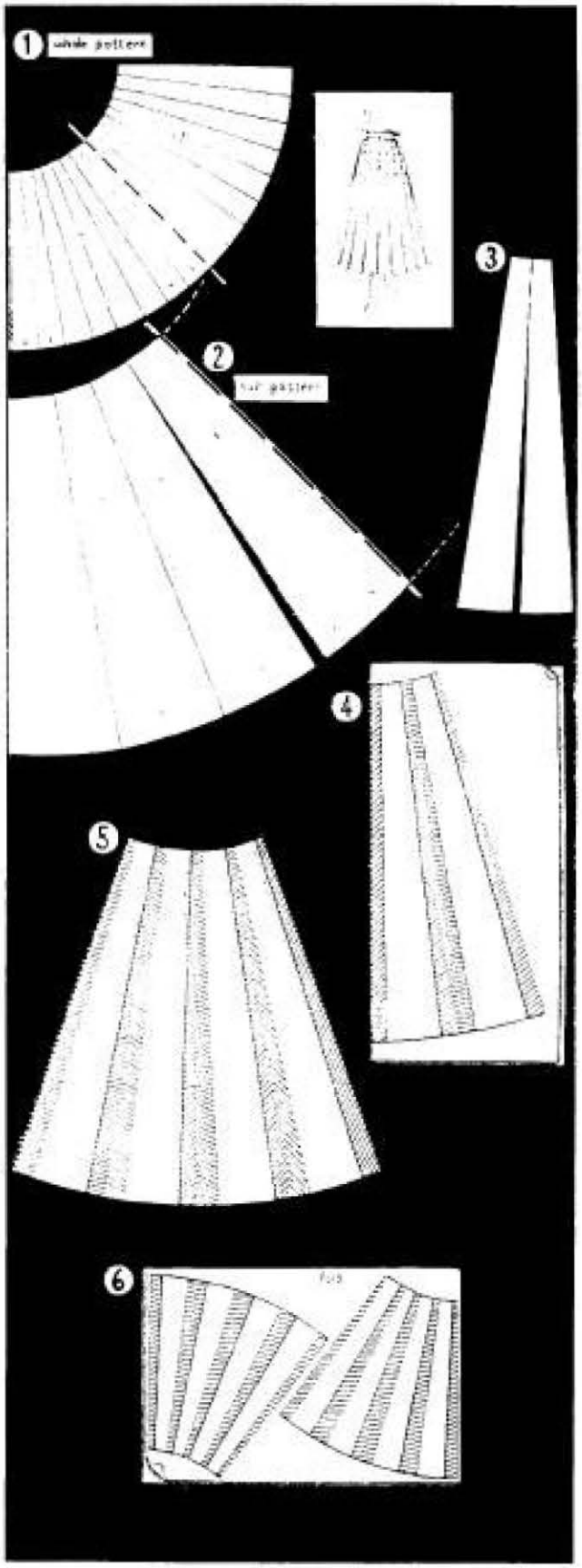


PLATE 37

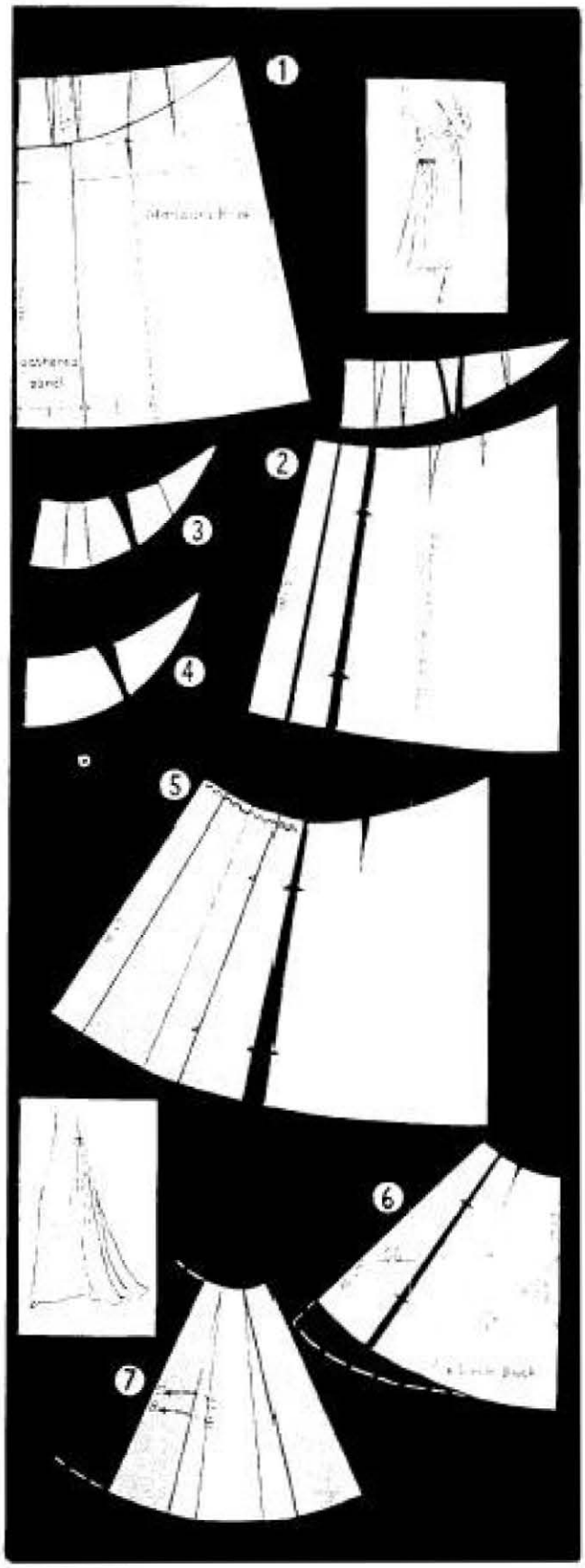


PLATE 38

PLATE 37—PLEATS IN SHAPED AND CIRCULAR SKIRTS

The style is an example of how **shaped pleats** can be introduced into a Fully Shaped or Circular skirt divided into or containing a number of narrow sections which look like gores, though they are *not always necessarily cut as separate gores*. They may be planned evenly all round, so that the skirt appears like an all-round pleated skirt; or they may come in groups, in some parts only, e.g. only in the back or in the front.

A Quarter-circle foundation (see Chapter XVI) is more convenient for these styles because it is easily divided *by simple folding* into any number of absolutely equal and correctly graduated sections. Even when the style has only a *group* of such gores with pleats, it is often easier to find their correct size and shape by first dividing the *whole* pattern equally (FIG. 1), and then using only the number of gores required.

Following the line of the skirt, the shaped pleats are graduated usually from a very narrow (tuck) width at the waist to about 2½–3 times their width at the hem. Since it is not always convenient to cut each pleat with its own separate gore (several are generally cut together, in one piece—see FIGS. 4, 5) each pleat must come on a different grain and their hang (and sharp edge) depends considerably on good pressing, suitable material and on edge-stitching.

Sometimes these styles are cut as **real gored skirts**, i.e. divided into separate gores, to each of which a pleat is added: in this case the gores can all be cut *on the same grain* and the hang will then be more even. It is a more expensive way of interpreting the style, as it involves more work.

The *whole* Quarter-circle skirt (waist 70 cm) is shown in FIG. 1 divided into 16 gores, to each of which a pleat must be added. In practice, it is sufficient to make the pattern for a quarter of the skirt only.

Using *half* of the quarter-circle *as a block*, divide it by folding into 4 (FIG. 2) and take *one* of the sections only (⅛ of the whole skirt). Cut it lengthwise in half (FIG. 3) and place the two pieces on paper *folded double* (fold to the left), allowing for a *full pleat* (3 cm at the waist, 8 cm at the hem) *between them*, but only half a pleat (1·5–4 cm) at the sides (FIG. 4). One of these half-pleats must lie along the fold of the paper. Test the correct placing of pieces as usual by folding out the pleat between them. Trace the pleats through to paper underneath and cut the *double* pattern: when opened out it will appear as in FIG. 5.

The pattern (FIG. 5) is a quarter of the whole skirt, and thus four such sections must be cut in material and joined by 4 seams (CB, CF and sides). The pleats are usually stitched down at the top and often edge-stitched as well.

FIG. 6 shows a popular Lay for the style, with one edge of the pattern (side seam) laid to the selvedge (i.e. SG) and the other (CB and CF) on the bias. It is also possible to lay it with the SG down the middle and all the seams on the same bias. The skirt can also be cut in eight parts, to avoid too much slope on the seams.

N.B. FIGS. 1 and 6 are ½ scale in relation to the others.

PLATE 38—GATHERED FULLNESS IN SKIRTS

The styles illustrate the **method of adding fullness to one part of the skirt only**, the fullness being controlled by **gathers or folds**, not pleats or flares. The *stand-away effect of the hem* in the back (sometimes described as 'bustle line') is achieved by adding more width at the hem than at waist level.

The fullness can, of course, be added in this way to any part of the skirt, i.e. to the sides, the front, etc. Nor need the addition be different at waist and hem. For instance, for a front gathered panel (an 'apron' effect) the same width is usually added right through.

Style A is a dress skirt and is cut either on the Standard or the Straight block. The more clinging fit of the latter would emphasize the 'fly-away' effect of the back panel (particularly if a lining is used across the back to keep the skirt front flat).

Outline the Hip yoke following the sketch. Mark on it a small dart in the front, taking it out of the front part of the side dart (FIG. 1). In the back replace the single Dress dart by two smaller ones for the correct shaping of the yoke part (as in FIGS. 2 and 3, Chapter XIII).

For the fullness in the back, first mark the section which will be gathered, outlining it as a 'panel': for this a good proportion is half of the width of the back, so fold the back lengthwise through the middle.

Cut the pattern, separating the yoke part and back 'panel' from the rest (FIG. 2). Complete the Hip yoke as usual, closing darts and re-cutting for a final pattern (FIGS. 3 and 4).

For the back fullness, cut 'panel' through the middle and lay the two sections on new paper, adding width as shown in FIG. 5. The amount added at the top *doubles* the 'panel', and at the hem—*trebles* its width. This has the effect of giving the gathered section a bigger 'sweep' of hem and of making it stand away from the figure. As already stated, the fullness can be gathered and pulled up to the original size of the 'panel', or it can be arranged in deep folds which will naturally be wider (deeper) at the hem.

The usual Centre side seam may be used, if preferred, but in this style it is better to omit the side seam altogether, using only the dart at the top (the remainder of small front dart can be added to it). There is of course a seam between the gathered back panel and the rest of the skirt.

Style B—a long evening skirt—is cut from the same type of pattern. It is, however, a style which is often cut on the true bias (note clinging effect of skirt in sketch). In such a case the Fully Shaped or the Quarter-circle foundation must be used (FIG. 6). The 'panel'—¼ of the back—is trebled at the waist and made still wider at the hem. In fact, the whole of this section is often cut as a Quarter-circle. The skirt may have a train (indicated by broken line in FIG. 6).

N.B. FIGS. 6 and 7 are drawn to half of the scale used for the other illustrations.

CHAPTER FIFTEEN | FLARES

Flares appear as the result of making a piece of material hang in such a way that one of its edges (the loose edge) develops fullness in the form of 'flares' or flutes, while the opposite edge, which is fixed, remains quite flat, without gathers, pleats or any other visible fullness to account for the fluting of the lower edge. As can be seen from modelling, it is a way of *draping* which consists in manipulating in a certain way the top edge to produce fluting fullness in the lower edge.

Flares appear in hems and also in other parts of skirts and bodices: flounces, loose panels, basques, capes, collars and various trimmings—all these can be flared.

There are two methods of cutting flares on the flat: the Standard or Cutting-up method and the Drafting method.

The Standard (Cutting-up) method consists in producing the pattern *by stages*, i.e. first outlining its shape *flat* and then adding, from one edge only, the fullness for the flares.

The Drafting method consists in *drafting the finished pattern*, which already contains the flares. This is always a circle or part of a circle, and the method is given in the next chapter (Circular patterns).

To these two basic methods must be added the method of obtaining flared effects, mainly in the hem, by adding extra hem width to gores and narrow sections (already described in Chapter XIII). This can be called '**Side Flaring**' to distinguish it from real flaring, which is a definite way of setting and draping the fabric, while here the flare appears at the side of a gore only as the result of adding extra hem width from a point in the seam.

Finally, one must mention the flared effects produced by inset pieces or '**Godets**'. In this case the flares are cut quite separately and let into a plain foundation with the seams or joins clearly showing.

STANDARD METHOD or Cutting-up method

This method is *suitable for any type of flared pattern*, including the Circular patterns which are, however, more often produced by the Drafting method. It can best be explained by one or two simple examples.

A flared flounce, fixed to a skirt horizontally at knee level or just above it, is first outlined on the skirt pattern (FIG. 1), then traced through on to another sheet of paper and cut out. After folding in half and again in half to obtain 3 crease lines, it is cut on these lines from the lower edge up to within 0·3 cm of the top edge. The strips (holding together on one edge) are then placed on new paper and spread out to introduce the extra width or 'flare' into the hem of the flounce. The pattern is pinned, outlined and finally cut out.

The additions are divided as equally as possible between the slashes when, as in this case, it is necessary to obtain a good smooth curve at the top in order to ensure the *even hang of the flares all round the figure*. The actual amount added will vary, however, according to style and fabric. Sometimes the addition will be small (FIG. 2), sometimes sufficient to place the two outer edges *at right angles to each other*, thus producing a quarter-circle (FIG. 3); sometimes it will be considerable and the pattern will be more than a quarter-circle (FIG. 4). In this case the *full* flounce (whole back plus whole front flounce) will be more than a full circle.

Each pattern piece—front and back—is *placed to the fold of the material* to obtain a whole front and a whole back flounce, which are finally joined on the side seams. In the first case (FIG. 2) the whole flounce is less than a circle; in the second (FIG. 3) it is equal to a circle; in the third (FIG. 4) it is more than a circle.

The pattern can also be spread out to form a half-circle which, when placed 'to the fold', will give a full circle for the front (or back) and therefore two circles for the full flounce (this is sometimes used for short flounces in very soft material, such as chiffon). Theoretically there is no limit either way to the amount of extra fullness added: in practice, this is, of course, controlled by the requirements of fabric, style and fashion.

It will be noted that **the shape of the curve** on the top edge changes with the amount of fullness added: it is this curve that controls the 'hang' of the flares when the flounce is in position. It should be outlined on the pattern and handled in the material with the greatest care.

Varying the fullness between the strips is the most responsible part in cutting flared patterns, for there are no definite rules or measurements to follow (an occasional reference to the circle is one of the few helpful landmarks). One can only follow what is most usual according to the fashion of the day, and one has to rely considerably on judgement, taste and experience.

It is always possible, however, to do a certain amount of experimenting with flared patterns by placing them and pinning in correct position on the stand or table, i.e.

by actually forming the flares or flutes and then judging the effect. In this way one can get some idea of whether the fullness is sufficient or not. Apart from such trying out of flared patterns by 'draping' on stand or table, and the careful study of the design, an experienced cutter will always consider the texture and weight of the fabric to be used: the lighter and softer it is, the more fullness one allows between the strips, and vice versa.

It must be noted that the actual hem width of a flared skirt or flounce alters with its length. For instance, the deeper a flounce, the fuller will be its lower edge, and the more definite and 'set' the hang of the flares. The effect of a flared pattern must, therefore, always be judged at its correct length.

Another simple illustration of the Standard method is provided by the flaring of a skirt. The Fully Shaped skirt block is already a slightly flared skirt, but it has a *controlled allowance* round the hips, and its hem width depends on the waist suppression (i.e. on the waist darts—see Chapter XI). By cutting this pattern from the hem upwards along 2-3 lines, and opening it out at the hem, a flared skirt of *any width* can be obtained. Such a skirt fits tightly, without any darts, round the waist, but has considerably more fullness round the hips, fullness which is not controlled by any measurement or proportion, but depends entirely on the amount of extra width introduced into the hem. With more hem width, the flares develop from a higher level, often from the waist. The shape of the waist curve changes. The **controlling factor,** therefore, is the **fullness of the flares** on which everything depends. This applies to all flared patterns.

It was seen in the diagrams that when the original top edge is a straight line (FIG. 1), then in a flared pattern it becomes a curved line (FIG. 2, etc.). If it is already a concave curve (e.g. a skirt waist), then it becomes more curved with flaring. But if it is a convex curve, then with flaring the curve flattens out and gradually moves towards a straight line.

When outlining the final pattern, the indents and angles formed by the cut strips should not be followed, and the line should be blended into a smooth curve to give the flares an even, well-spaced hang, and some 'movement'. Following the indents would 'fix' the flares at these points, and the effect of this is rather hard. Of course this does not apply to cases where the 'fixing' of the flares at definite points is a feature of the style. In such cases the slashes are actually made at these points.

A few simple patterns, such as the flounce just described, may be cut from a rectangle of correct width and length, without reference to the pattern of the style (except for finding the measurements required). This method, however, is limited to just a few simple flounces or skirts, whereas the general method explained above can be used for any flared pattern, simple or elaborate, symmetrical or asymmetrical, flared evenly or unevenly, and in a variety of different ways.

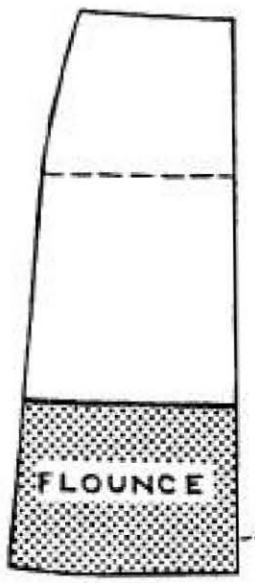


FIG. 1/xv

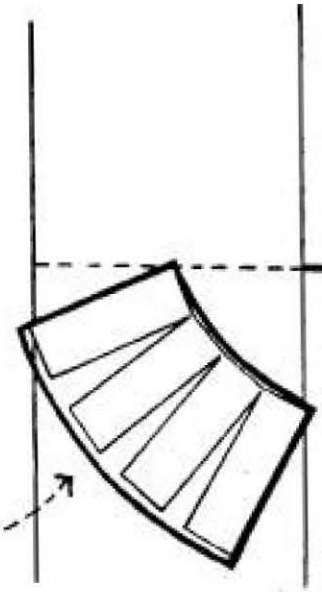


FIG. 2/xv

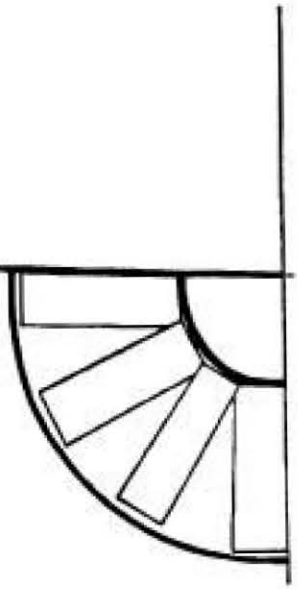


FIG. 3/xv

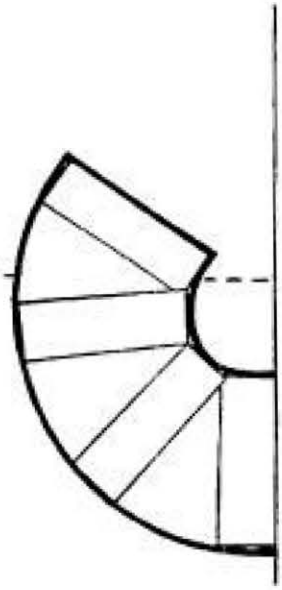


FIG. 4/xv

In practice **two distinct cases** arise when cutting patterns with flares:

(*a*) a *whole section* of a bodice, sleeve or skirt, such as a flounce, basque (peplum), collar, cape, jabot, panel, etc., *is flared*, or

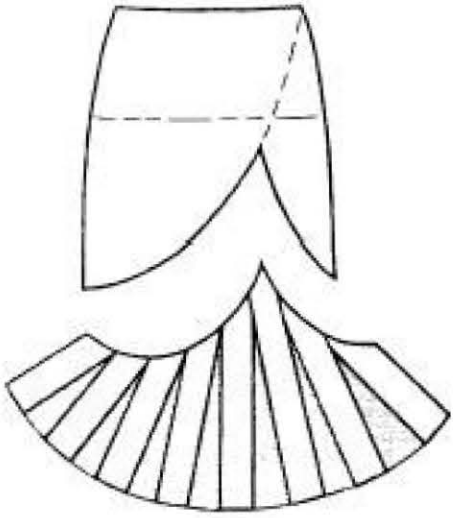
(*b*) flares are introduced *at one or more definite points* only, e.g. a 'bunch' of flares in the front or back of a skirt, in a loose bodice drapery or collar, in a loosely hanging skirt wrap or panel, etc.

In the first case the whole flared section is first outlined on the pattern, according to the design, and cut away from the rest of the pattern. It is then divided into three or more sections, and cut as usual from one edge only. The strips are spread out on another sheet of paper to introduce the extra width for the flares (FIGS. 5, 6). The finished flared section is inserted again into its original position in the pattern.

The appearance of the flared section will vary according to whether it is cut on the straight grain or on the true bias. The straight grain will produce more definite, stand-away flares, fuller in appearance. The effect of the true bias is to soften and flatten the flares, and to make them develop from a lower level, while giving the whole section a more clinging fit.

In the second case, the position of the flares is first marked by a line (or two lines) *exactly where required*. A slash is then made along this line (it must go up to an edge), and the necessary width is introduced to form one or more flares at this point (FIGS. 7 and 8). Such flares are usually more or less *fixed*, i.e. they do not move about at the top, and sometimes start from an indent or an angle, i.e. from a very definite point. If the width allowed in such a slash is considerable, the result is a 'bunch' of flares.

FIG. 5/xv



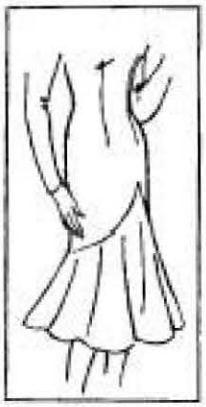
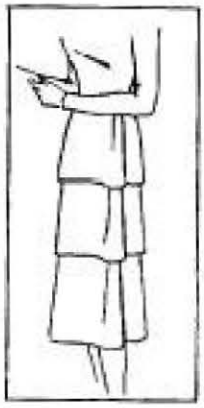
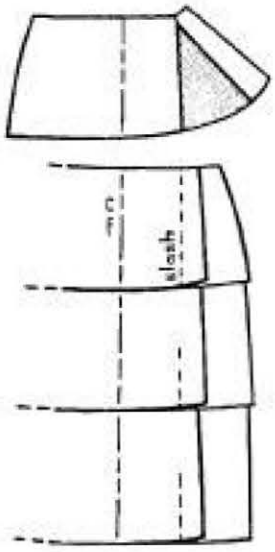


FIG. 7/xv





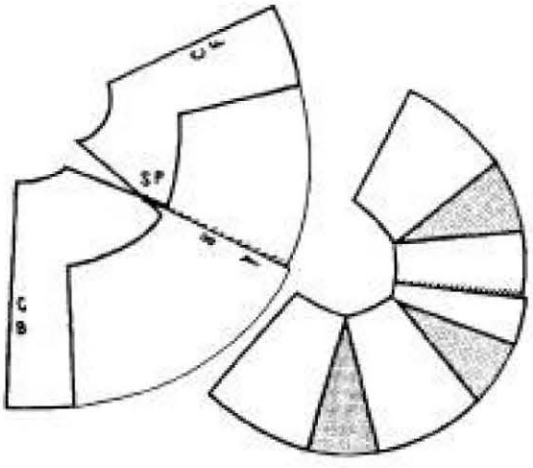


FIG. 6/xv

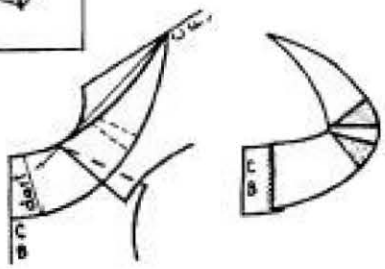


FIG. 8/xv

GODETS

Godets are shaped inset sections which, when introduced into a straight pattern (usually into a skirt), give the *effect of flaring without the pattern itself being flared.* If introduced into an already flared pattern, they increase the effect of flaring.

The *opening* into which a godet is set may be just a slit (this is the most usual), or it may be a wider opening, i.e. a cut-away strip of certain width, pointed, square or curved at the top. According to the shape of the opening, the godet will be either a pointed sector (fitting into a slit) or a band of the same shape at the top as the cut-away strip, but with some extra fullness in the hem: this extra hem width, producing fluted fullness, is the whole reason for using a godet (FIGS. 9–10).

A pointed godet can be drawn free-hand with just the help of a centre guide line equal in length to the length of the slit (which must be marked on the pattern). It can also be produced by the Drafting method (explained in Chapter XVI) as a sector of a circle, the radius of which is equal to the slit (FIGS. 12–13).

A shaped godet is first marked on the pattern as a strip of the right length and shape, then cut away and flared as usual by slashing and spreading out.

Sometimes the extra hem width is added by Side flaring, as in gores. The effect is somewhat different, and Side flaring is more likely to be used for a godet of considerable size, i.e. an inset narrow panel or long section, which it is desirable to keep flat in its upper part. The godet flared in the usual way, i.e. from the top, gives flaring fullness right from the top (FIGS. 10–11).

FIG. 9/xv

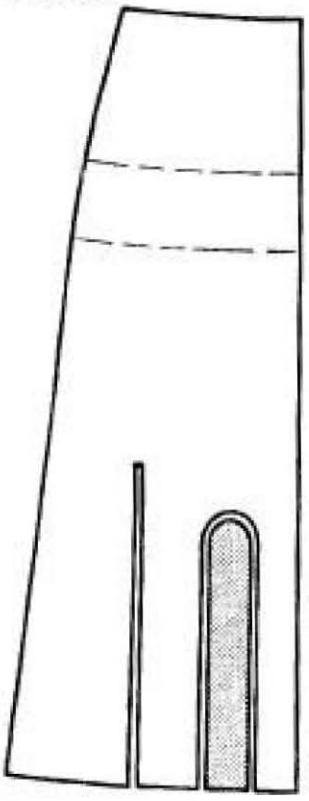


FIG. 10/xv

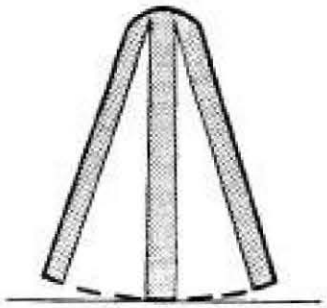


FIG. 11/xv

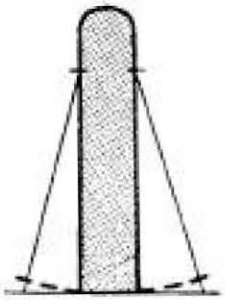


FIG. 12/xv

FIG. 13/xv

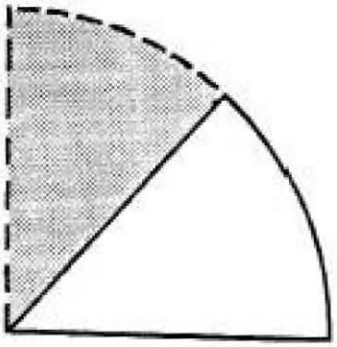
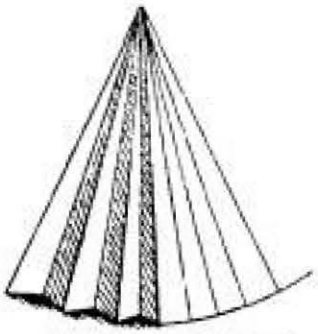
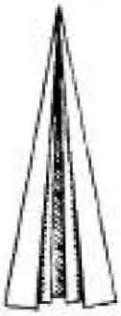


FIG. 14/xv



accordion pleated



flat pleated

FIG. 15/xv

CHAPTER SIXTEEN

CIRCULAR PATTERNS

DRAFTING METHOD

The Drafting method is not suitable for every type of flared pattern, but when it can be used it has the advantage of being very accurate and quick.

The method is suitable mainly for all kinds of circular skirts—short and long—and for circular flounces fixed along horizontal lines round the figure. It is also suitable for other patterns based on circles, such as some petticoat styles, loose knickers, full capes, etc. Patterns of many evening skirts based on the circle, or with tiers of circular flounces, would take a long time to cut if it had not been possible to use this much simpler and quicker method which involves no slashing and inserting of extra width. **The final pattern, already containing all the width necessary for flaring, is cut directly** by drafting a circle, or more frequently a part of a circle (e.g. a quarter-circle). Instead of determining in advance the actual amount of fullness to be added for flaring (as in the Cutting-up method, Chapter XV), the Drafting method consists in *selecting* that section of a circle which already gives the right amount of flaring fullness required by the style.

It is therefore necessary to understand how the different sections of a circle can be cut so that their top edge exactly fits the line to which it must be joined (e.g. for a skirt—the waist, for a flounce—the line along which it is mounted). It is also important to know what hem fullness each of these sections gives, in order to be able to choose correctly which pattern to draft.

The flares produced by this method are usually spaced out fairly evenly, and any difference in hang is caused by difference in the grain of the fabric, which is difficult to control, since some of the flutes are on the straight and some on the bias. The method is not suitable for styles where the flares or flutes have to be spaced unevenly or concentrated in one place. Theoretically, it is also unsuitable for any style in which the flounces do not hang from a simple horizontal line. In practice, however, small flounces fixed to lines of various shapes, viz. curved, scalloped, pointed and running in different directions (vertical, on a slant, etc.) are often cut in this way to save time, ignoring the fact that their hang is affected by the shape and slant of the line.

The method is based on the drawing of circles with compasses, the latter being replaced by a tape measure (or even a piece of string) which is *fixed at one end, i.e. the centre of the circle*, while the other end swings describing circular lines. By holding a short pencil or flat piece of tailor's chalk at the required division of the tape (i.e. the radius) correct circular lines are marked on the paper (FIGS. 1 and 2).

A square sheet of paper is generally used, measuring from 25 to 50 cm more than the required length or depth of the pattern (whether skirt or flounce). A tape measure with a metal end and a hole is often convenient, for a drawing pin or pin stuck through the hole can fix it to the table (a tape can also be held through its first division). If it is not convenient to stick pins into the table the tape can be held down with the left thumb, but in such a way that it moves a little under the thumb when the other end swings describing circular lines.

The lower left-hand corner is generally the best to use for the *centre of the circle* to which the tape measure is fixed, as just described (point O—FIG. 1). It can be reinforced with gummed paper, which projects a little, to allow the pin to be stuck right into the corner. With the tape stretched and held slightly taut, the loose end is moved from the left edge down to the lower edge of the paper, describing circular lines of different length according to the distance from the centre (point O) at which the curve is drawn. This distance, i.e. the radius of the circle, is first measured (preferably with a second tape measure) and marked on both edges (from O to A in FIG. 1). The resulting curve (a quarter-circle) is then checked by direct measurement: if not correct, another curve can be drawn a little farther out to increase the length or further in (nearer O) to reduce the length. Such correcting is sometimes necessary when a curve, already drawn, is found to be too far out in measurement; but generally the radius, i.e. the distance O–A (in FIGS. 1 and 2) can be *worked out in advance* sufficiently correctly. A small mistake can be ignored, particularly when the circular line is on the short side: it will easily stretch to size.

To complete the pattern, it is necessary to measure, again preferably on both edges, i.e. from a to b and A to B (FIG. 2), the *length* required for the skirt or for the flounce. Swinging the tape measure (still from point O), a second circular line is drawn from b to B for the hem of the pattern.

To find radius O–A one should take one-sixth of the circumference (i.e. of the *full circle* which would result from taking the quarter-circle four times). In practice, this is not an easy way to work out the radius, since one

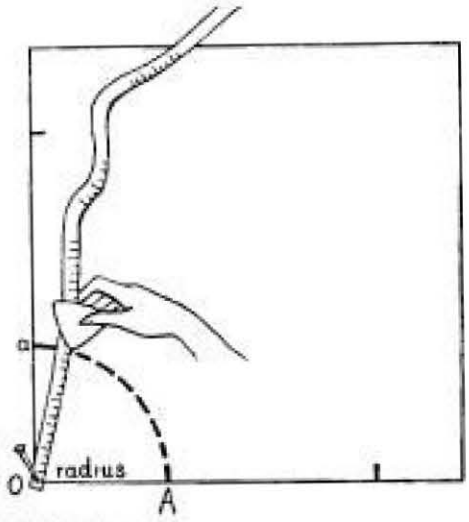


FIG. 1/XVI

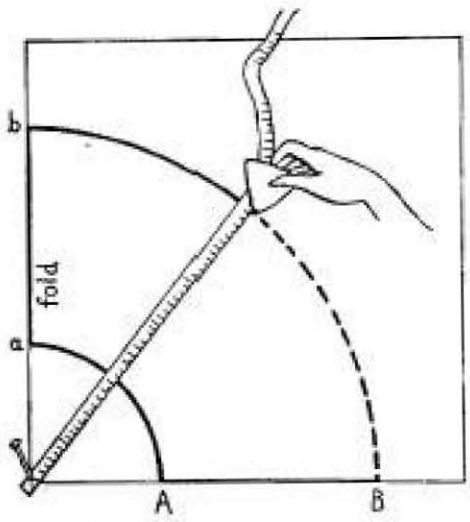


FIG. 2/XVI

is usually concerned only with a quarter-circle which must have a certain definite length along its top curve A–a. It is therefore more convenient to work out the radius by taking it as $\frac{1}{5}$ of this required length A–a. If A–a is to be equal to $\frac{1}{4}$ of a 69–70 cm waist, i.e. 17·5 cm, then $\frac{1}{5}$ of that would give a radius of *approximately* 11+ cm (keeping the fraction on the small side is more practical). If A–a is to be 35 cm, i.e. equal to half the waist, then $\frac{1}{5}$ of 35 can be taken as 22+ cm.

The length A–B is measured quite simply according to the length required by the style (skirt length or depth of flounce). No further calculation is therefore necessary.

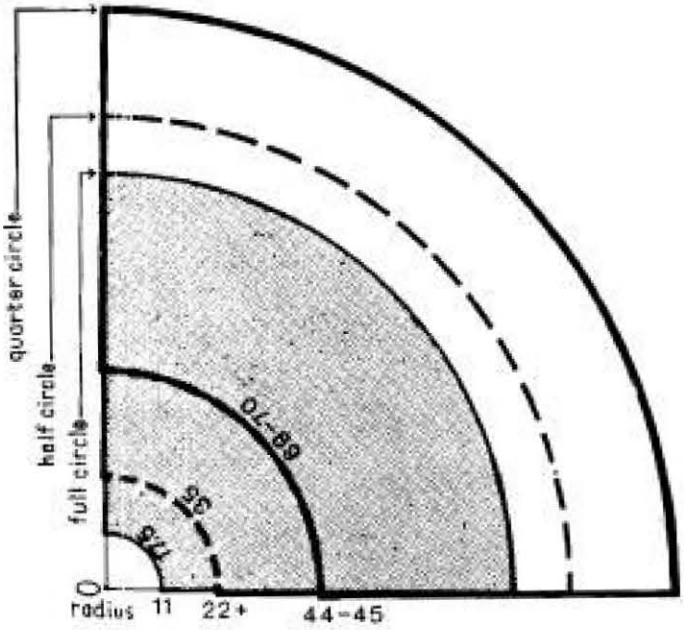


FIG. 3/XVI

On completing the pattern, it is useful, however, to check the hem width (and write it down) so as to have an idea of what the *total hem width* is working out.

It must be clearly understood that the pattern produced in this way is always a **Quarter-circle** which can be described as the **basic pattern** of this method.

It is, of course, possible (and in some cases practical) to draft directly a half-circle pattern, taking a larger sheet of paper, placing point O (the centre) in the middle of the lower edge, and swinging a half-circle from the left lower edge to the right one; or simply to draw a quarter-circle on *paper folded double*. It is also possible to produce a circle by placing point O in the middle of the paper or by drawing a half-circle on double paper. But in practice, by far the most convenient, is to *use the Quarter-circle as a basic pattern for all*, taking it twice for a **Half-circle** pattern, three times for a **Three-quarter circle** pattern and four times for a **Full circle** pattern. It can also be used as a complete pattern in itself.

In each case the length of the top curve A–a must be different, according to whether it is to equal the full waist, because the pattern is to be used once, or the half-waist, because the pattern is to be used twice, or the quarter-waist, because the pattern is to be used four times to produce a full circle.

In practice, once the radius for the quarter-waist (e.g. for 17·5 cm) has been found ($\frac{1}{5}$ of 17·5 = 11 + cm) it only has to be doubled (22 cm) to obtain a top curve A–a equal to half-waist, and doubled again (44 cm) to obtain the full waist measurement of 70 cm (see FIG. 3). This last pattern can be used as it is, and represents a *complete skirt*, i.e. full back and full front in one. It is a very useful **additional skirt block**, similar to the Fully Shaped skirt foundation, but often more convenient in adaptations because of its regular geometrical shape. *Half* of it is generally used as a block (see Plate 37).

Cutting flounces: the measurement for the top curve A–a is taken from the line on the skirt pattern *to which the flounce will be attached.* If the flounce is to be attached round the hips—a ¼ of the Hip width is the length required for the top curve A–a. Thus, if the finished Hip width of the skirt is 104, A–a is 26 cm. The length A–B is the required depth of the flounce (e.g. 16–18 cm or more, according to the style). The finished pattern—always a Quarter-circle—is placed to the fold of the material to obtain a Half-circle for the front and one for the back (joins at the sides). The full flounce is therefore a full circle of the right depth (or width), the top curve of which (104) fits flat round the hips.

In the case of a **style with tiers of flounces** (see Plate 40—sketch A) the skirt foundation, either Standard or sometimes Fully Shaped, is divided into horizontal sections, equal or graduated in depth according to the style. Quarter-circle patterns are then produced for each section (allowing 3–4 cm *extra depth for the overlapping* of flounces when mounted).

It will be easily understood that according to the foundation—Standard, Shaped or sometimes Straight—there will be more or less difference between the top edges of the flounces. When the difference between two successive flounces is not very great (e.g. with a fairly straight skirt foundation—style A, Plate 40), then it is possible to simplify and speed up the cutting of these styles still more by making the patterns for *alternate* flounces only, and adjusting them to the flounces in between. This can be done quite easily if one remembers that *by lowering* a top curve, i.e. cutting it down (from a to b, FIG. 4) it is *made longer* to suit a lower position on the skirt foundation, and vice versa, *by raising* (from a to c, FIG. 4), it is *made shorter* for a higher position. The depth is adjusted accordingly. Small inaccuracies in measurements are usually of no great importance in such cases.

It is possible, and often necessary, to increase the fullness of circular flounces, and this can be done: (*a*) by 'cutting-up' as in the Standard method; (*b*) by drafting a *double* flounce, i.e. a Full circle instead of a Half-circle for both back and front; (*c*) by making the top edge longer than necessary and then gathering it to fit the line on which it is to be mounted (style C, Plate 40).

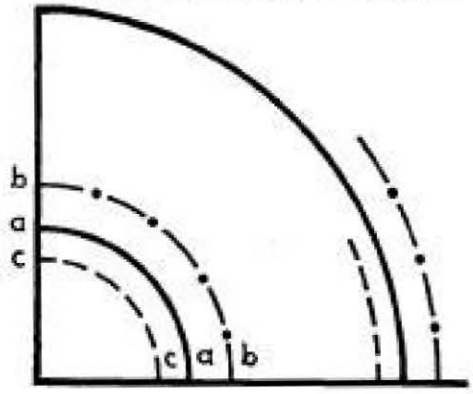


FIG. 4/XVI

All Circular skirts can be used as foundations for a variety of styles, both short and long.

The Full Circle is a useful pattern, mainly for long (evening) skirts and sometimes, when fashionable, also for short skirts. If necessary, the hem width can easily be reduced a little (as shown in FIG. 5). In material it can be cut with just the two side seams (this will require joins above the hem in long skirts), or with four seams (as a 4-gore skirt), or with eight seams (as an 8-gore skirt). It is useful to study lays of Circular patterns on material and to plan Full circles in different ways.

The Full Circle pattern can also be used with *extra waist width* for gathering or folding. It is also the pattern for Sun-Ray pleated skirts (accordion pleating).

The Three-quarter Circle is used mainly for long skirts when a less full pattern is required. Seams are planned according to style and width of fabric.

The Half-circle is used even more than the Full Circle, both for short and long skirts, in a variety of styles. It gives a good average hem width in *long* skirts (just over 4½ m), and it can easily be reduced or increased when necessary, to cover a big range of hem widths.

It can be used with two or more seams, planned in different ways on the fabric (straight and bias), and have width added to the waist for various effects of folding, pleating, darting or draping.

The Quarter-circle Pattern, as already stated, is *a most versatile block*, suitable for a great variety of styles. It can be used for any style for which the Fully Shaped block is suitable. It is a very *useful pattern for bias (crossway) skirts.* It can also be used *twice, i.e. doubled*, for shaped *gathered* skirts; and it is also the foundation for many pleated skirts (see Plate 37).

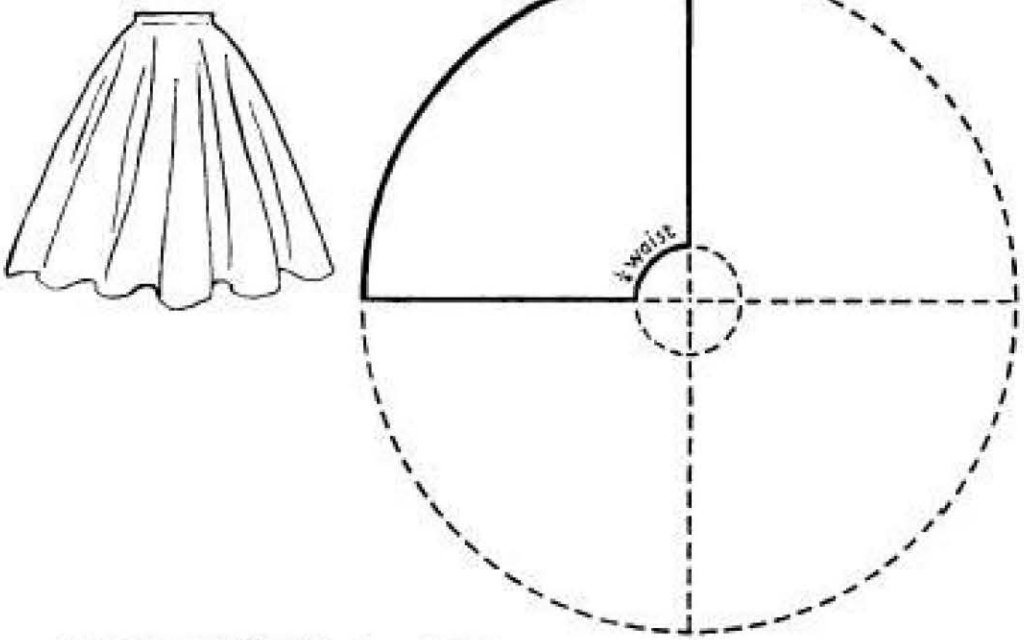
N.B. A careful check should be kept on the Hip Width of this block, for, since it is cut on the basis of the waist measurement, there is a danger that in some cases it will be too tight round the hips (like the Fully Shaped skirt). As an extra precaution it is advisable to cut it to waist + 4–5 cm., and to use a small waist dart in the side seams

It is useful to note the *approximate hem width* of the different Circular patterns, short and long, and in fact of all skirt blocks, as this often helps in the choice of the right foundation.

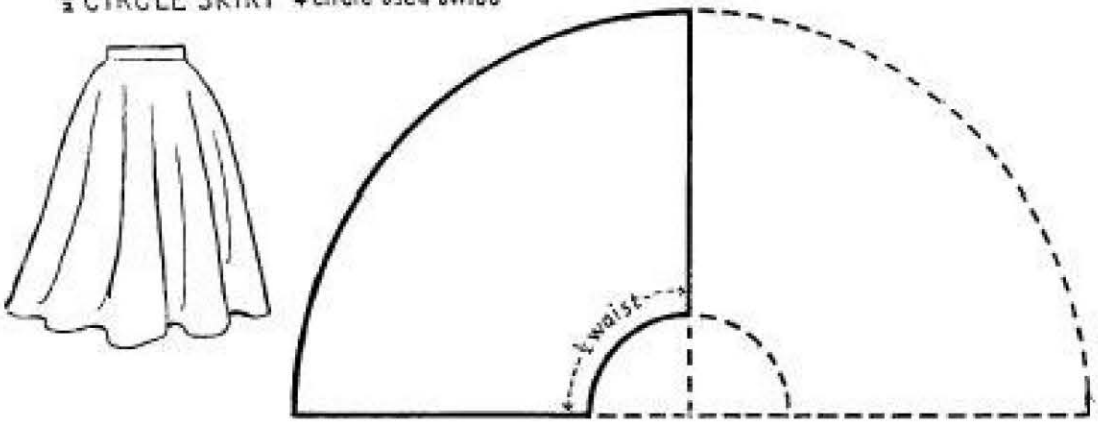
Average Hem Width	*Short* (up to 70–75 cm long)	*Long* (up to 100–105 cm long)
Full Circle—approximately	5½ m	7¾ + m
Half circle—approximately	3¼ m	4½ m
Three-quarter Circle	—	5¾ m
Quarter Circle	1¾ + m	2¾ + m
Fully Shaped skirt (varies)	1½ + m	2 + m
Standard skirt	1¼ m	1½ + m

N.B. All these are approximate figures which vary with the actual length of the skirt.

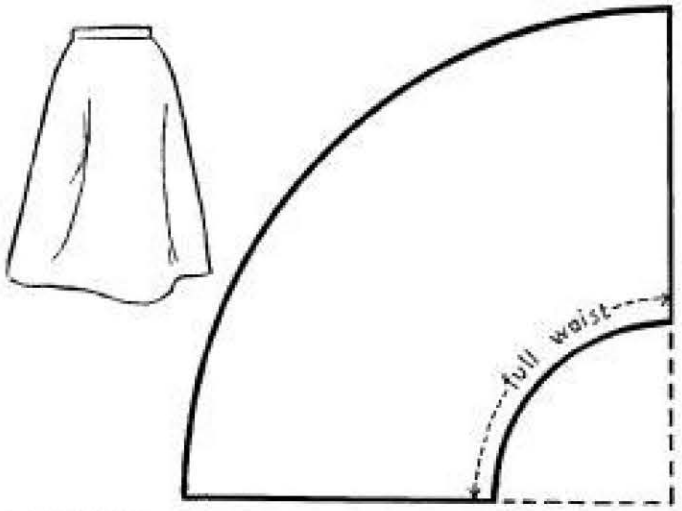
FULL CIRCLE SKIRT ¼ circle used 4 times



½ CIRCLE SKIRT ¼ circle used twice



¼ CIRCLE SKIRT ¼ circle used once



4 GORED SKIRT planned on ¼ circle

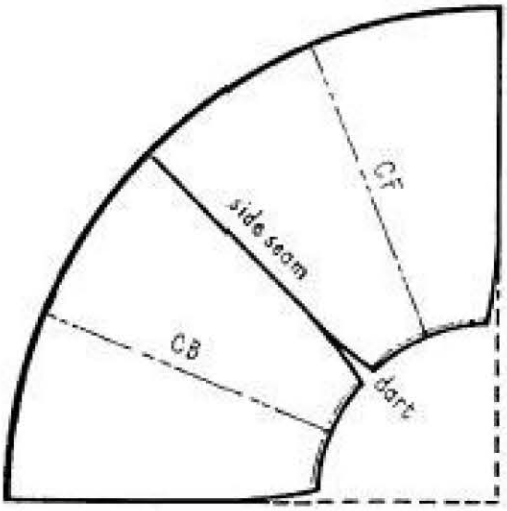


PLATE 39

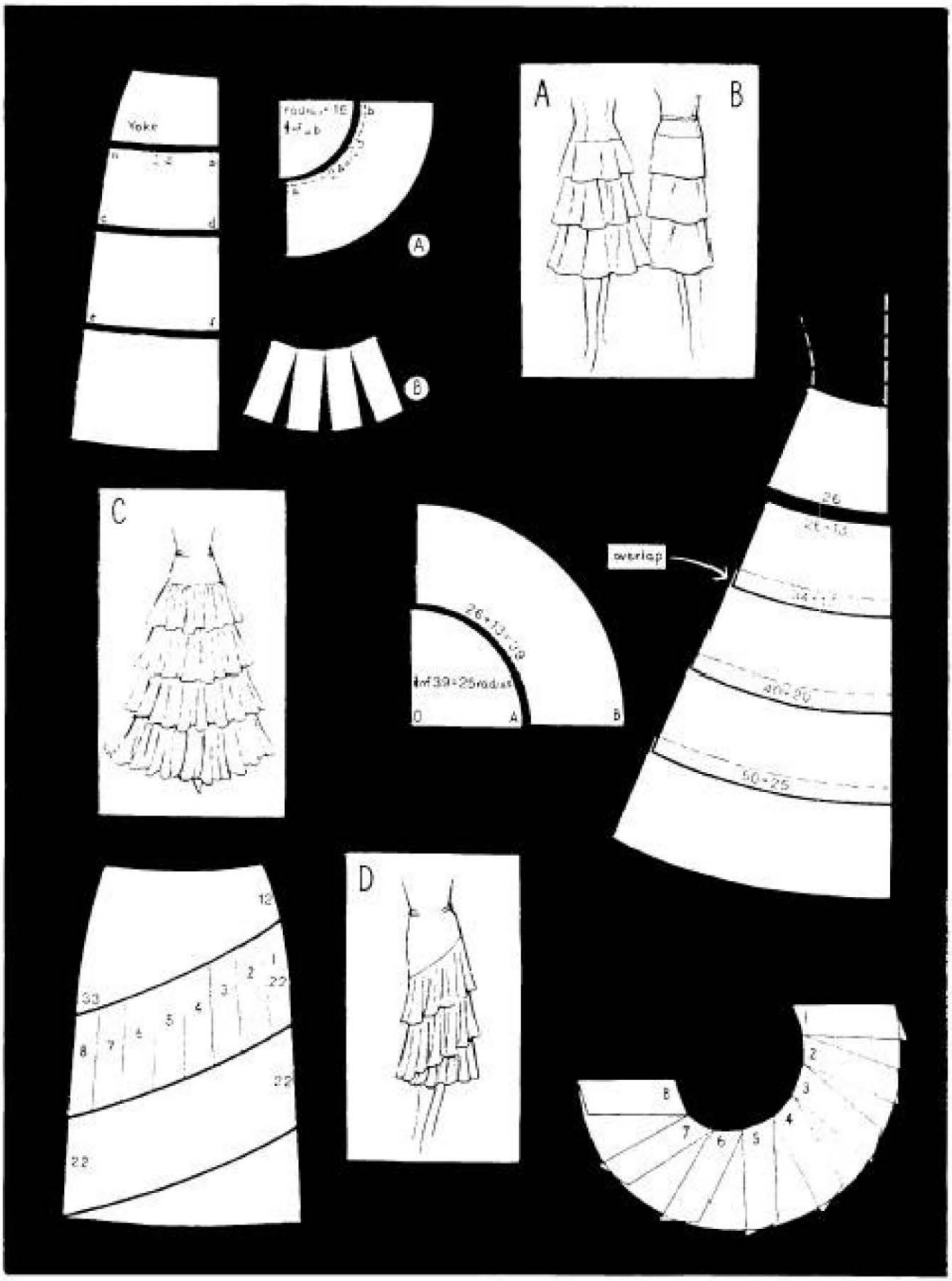


PLATE 40

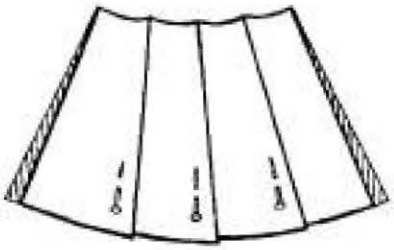


FIG. 5/XVI

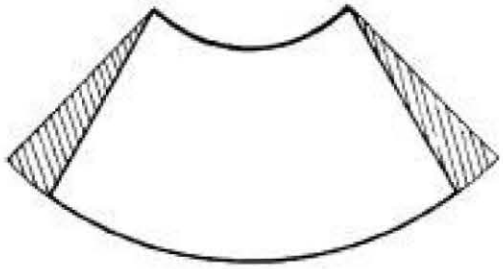


FIG. 6/XVI

CORRECT METHOD OF ADJUSTING FLARED PATTERNS

If a Circular pattern gives more width round the hem than is required for the style, the pattern, i.e. the Quarter-circle, can be reduced so that it loses hem width, while retaining its correct width along the top curve. It is obvious that in the process it becomes less than a Quarter-circle, and similar to the pattern shown in FIG. 2, Chapter XV (Flares). In deciding which Circular pattern to take for a particular style, it is quite usual therefore to choose one which is a little too full, as it can very easily be reduced to the exact hem width required.

The method of reducing illustrated in FIG. 5 applies not only to circles but to *all flared patterns, whatever their shape or size.*

No flared pattern should ever be reduced by trimming extra width off the sides (as in FIG. 6), as this will invariably spoil the hang of the flares, particularly if the pieces cut away are fairly large (it may sometimes be permissible to cut off 3–5 cm, but the necessity for this is more likely to arise at the fitting of an actual garment, rather than on a pattern, which can always be corrected quite simply and quickly by darting).

The correct way to reduce a flared pattern, therefore, is to reverse the process of flaring, as demonstrated by the Cutting-up method, and to reduce the width at the lower edge by *darting*, with the darts running off to nothing at the top edge. *Slashing* and overlapping the hem gives, of course, the same result.

Reduction of hem width in flared patterns is often necessary when using the pattern for a heavier or stiffer type of fabric than that for which the pattern was originally planned.

The method of increasing the width of flared patterns is, of course, the Standard or Cutting-up method explained in Chapter XV (Flares). However, if the width is to be added right through, i.e. through the top curve as well (for gathers, folds, etc.), then the *whole* pattern is cut and the extra width is introduced into it, as usual.

PLATE 40—FLOUNCES

The four styles—A, B, C and D—illustrate a variety of flounces produced by different methods.

Style A is a skirt with **graduated flounces**, i.e. flounces varying in depth. They are mounted on to a Standard or Straight skirt foundation. As they are fairly full (fluting) flounces, a Quarter-circle pattern would be suitable for them and the Drafting method can therefore be used. After dividing the skirt into a plain 12–15 cm yoke and three graduated sections which should have 4 cm difference in depth (e.g. 16, 20, 24 cm deep), make the patterns for the top and the lower flounces, *adapting* one of them for the middle one; or else produce a Quarter-circle for the middle flounce only, and adapt it for the flounces above and below (see FIG. 4). A 3 cm *overlap* should then be allowed for above the middle and lower flounces.

Style B has very **slightly flared flounces**, for which a Quarter-circle pattern would be unsuitable unless very much *reduced* (FIG. 5). The Cutting-up method will directly give the hem width required.

Style C is a wider skirt with **much fuller flounces**, which, moreover, are *gathered* along their top edge. The flounces are all of the same depth (in this case 20 cm), but as they are mounted on a *shaped* foundation (the Fully Shaped or Quarter-circle skirt), the difference between their top edges is bigger than in styles A and B. It would be more convenient to produce the patterns of at least two flounces, e.g. the first and the third, which could then be adapted for the intermediate flounces. A 3–4 cm overlap must be allowed for in all but the top flounce: this can be added above and below each flounce, which, being gathered, do not require the same accuracy in measurements as ordinary flared flounces (except in depth). Use the Drafting method, making each top curve 50% *longer to allow for the gathers.* Thus for the 26 cm line of the top flounce a curve of 26 cm must be produced with a radius equal to $\frac{2}{3}$ of 39, i.e. 25–26 cm.

Style D has **diagonal flounces** in the front continuing into horizontal flounces across the back, the whole forming a 'spiral'. The *whole* front of a Standard or Straight skirt pattern is used, and the proportions are often easier to calculate working upwards from the hem along the side where the flounces dip. For the back part of the flounce either method is suitable (according to hem width); but for the front the Cutting-up method is indicated. Note that the cut strips are opened out more between sections 5, 6, 7, 8, to compensate for the increased fullness produced naturally by the greater *slant* of the flounce in the upper part. The outer edges of strips 1 and 8 are parallel, as in a Half-circle, though this is not essential. Allow for overlap where necessary.

APPENDIX ONE | THE SIMPLIFIED BODICE BLOCK

The Simplified Bodice block, drafted to the waist only, is enclosed in a rectangle, the length and width of which are taken according to the size of the bodice. By thus fixing in advance the outer limits of the pattern, mistakes in working out some of the proportions can be reduced and some of the operations involved simplified. This makes it easier to supervise and check the drafting of this bodice block when teaching a class.

The block pattern can be drafted with a smaller number of basic measurements, even with three measurements only (Bust, Back and Length to Waist). The other measurements (Chest, Shoulder, Top Arm, Waist) are then deduced from the few basic ones and are checked at the fitting. But on the whole, it is more convenient to have a complete set of personal measurements, taken on the figure as for the Standard Bodice block.

If preferred, the measurements may be taken (or worked out or looked up in a Table of Average Measurements) one at a time as required, i.e. just before applying them in the draft: this often helps to make their purpose clearer and, in a class, provides more opportunity for explanations and careful checking.

The first stage can be further simplified by taking a *square* of paper, instead of a rectangle, and making it equal to ½ Bust + 5 cm: any unnecessary length can be cut away later.

This draft, though less controlled and lacking some of the finer points of the Standard block, produces a pattern very similar to the one given in Chapter II, especially in the smaller sizes. It must be remembered, however, that it is mainly suitable for use when conditions of work make it possible to test and adjust the bodice at a fitting.

All the methods of adaptation and pattern designing described in this book can be used with a Simplified block exactly as with the Standard block. It can be continued below the waist when necessary.

MEASUREMENTS

Bust	88 or 92 cm*	Essential measurements
Length to Waist (LW)	40 cm	Essential measurements
Back	36 cm	Essential measurements
Chest	38 cm (2 cm more than back)	
Shoulder	12·5 cm (approx. ¼ of Chest/Back)	
Top Arm	30 cm (approx. ¼ of Bust)	
Waist	68–70 cm—average	

The last four are measurements which may be deduced from the three essential measurements or taken from a Table of Average Sizes. They must later be checked.

Take a rectangle of paper equal to

½ Bust + 5 cm × LW + 5 (7) cm
e.g. 44 + 5 × 40 + 5 = 49 × 45

* The two sizes have very similar measurements except the Bust.

7 cm should be added to LW in larger sizes, Bust 100 and over. The left hand edge is the CB, the right—the CF.

BACK

Mark point O below the top edge, 3 cm down CB in small sizes, and 4 cm in larger sizes.

From O measure down CB the LW (40 cm). On this level draw the **Waist Line** right across the paper.

Halve length from O to Waist Line, mark a point 1·5 cm *lower* and draw the **Bust Line** (2–2·5 cm lower for a deeper armhole).

Halve O to Bust Line and draw the **Back Line.**

Halve O to Back Line, mark a point 2·5 cm *higher* and draw the **Shoulder Line.** (Or take it 3 cm from O down CB.)

From O square a short line from CB—the Neck Line.

All these construction lines are ruled or creased by folding at right angles to the CB. They are all parallel to the top and lower edges of the rectangle. Lines marked by creasing must be pencilled in.

From O measure along the Neck Line the *width* of the back neck equal to ¼ of the width of the paper, i.e. ¼ of ½ Bust + 5 cm, in this case 6·5–7 cm. Take this point 2 cm up and mark NP. Draw the neckline from NP down to O.

On the Back Line measure from CB ½ Back width (18 cm).

On the Shoulder Line measure ½ Back + 2 cm. Mark SP.

On the Bust Line measure ½ Back + 5·5 cm and mark UP.

Rule additional vertical construction line through the ½ Back point to cross the lines above and below.

From UP drop a perpendicular on to the Waist Line.

Draw shoulder seam between NP and SP.

Draw underarm seam slanting it in 2 cm from perpendicular.

Draw the armhole, guided as usual by the vertical line.

Fold the CB on to the vertical line to mark (by creasing) the ¼ Back (dot-and-dash line, FIG. 1). This is the guide (or construction) line for planning the Waist dart.

Check the length of the shoulder, which must be 1·5 cm longer than the measurement (for dart). Correct, if necessary.

FRONT

The Bust and Waist Lines have already been taken right through to the Front.

Rule the **Chest Line** 4 cm above the Bust Line.

From CF point O, *along the top edge*, measure the neck width, which is equal to the back neck width (7 cm) but is never less than 6·5 cm. Mark NP.

From point O measure down the CF 7 cm for lower neck point.

Connect this last point with NP by a ruled line and draw the neckline curving it 1·5 cm from the straight line.

From NP, along the Top line measure 12 cm out and then take this point 5·5 cm down (vertically). Through this last point rule from NP **provisional shoulder seam,** leaving it unfinished.

Along the Chest Line measure from CF ¼ Chest measurement, mark *provisional* ChP, and halve this line by folding the CF line over to touch the ChP. The resulting crease (dot-and-dash line, FIG. 1), which is at ¼ Chest measurement from CF and parallel to it, is the guide line for the planning of the darts.

Draw the **Shoulder dart** from a point 2 cm beyond the guide line at the top, down to 2 cm below the Bust Line where it touches the guide line. Measure the size of the dart along the top and complete as usual. In this block the dart is sometimes made a little smaller (6·5–7 cm).

Measure final shoulder seam, which is equal to shoulder length plus size of dart. Mark SP.

Mark the *final* Chest width by moving the provisional ChP farther out to allow for the Shoulder dart width on this level (2 cm farther out in this case).

Rule short construction line between SP and final ChP and drop a perpendicular on to the Bust Line.

Draw the armhole, guided by the two last lines.

Rule the underarm seam slanting it in 2 cm from the perpendicular. Curve and shape the seam lines as usual.

Shape the waist by planning 2 or 3 cm darts on the guide lines. These can later be adjusted to individual waist measurement (i.e. waist + 4–5 cm) or checked at the fitting.

Draw the final waistline, dropping it 1 — cm on the side seam and 1·5 cm on the CF.

Check size of armhole, back and front, to see that the usual *minimum* of Top Arm + 12 or 13 cm has been obtained. Correct if necessary (see Standard bodice block, Chapter II). If a larger armhole is generally preferred, the Bust Line may be placed lower when drafting (2–2·5 cm below half-point).

The Slanted CB and CF may be added at this stage, reducing the Waist darts accordingly. Or they may be introduced later, when required by a style.

The Simplified bodice block may be continued below the waist when necessary. For the addition of the lower part one can follow the method given for the One-piece dress in Chapter XII, and allow on Hip level ¼H in the back and ¼H + 2–3 cm in the front.

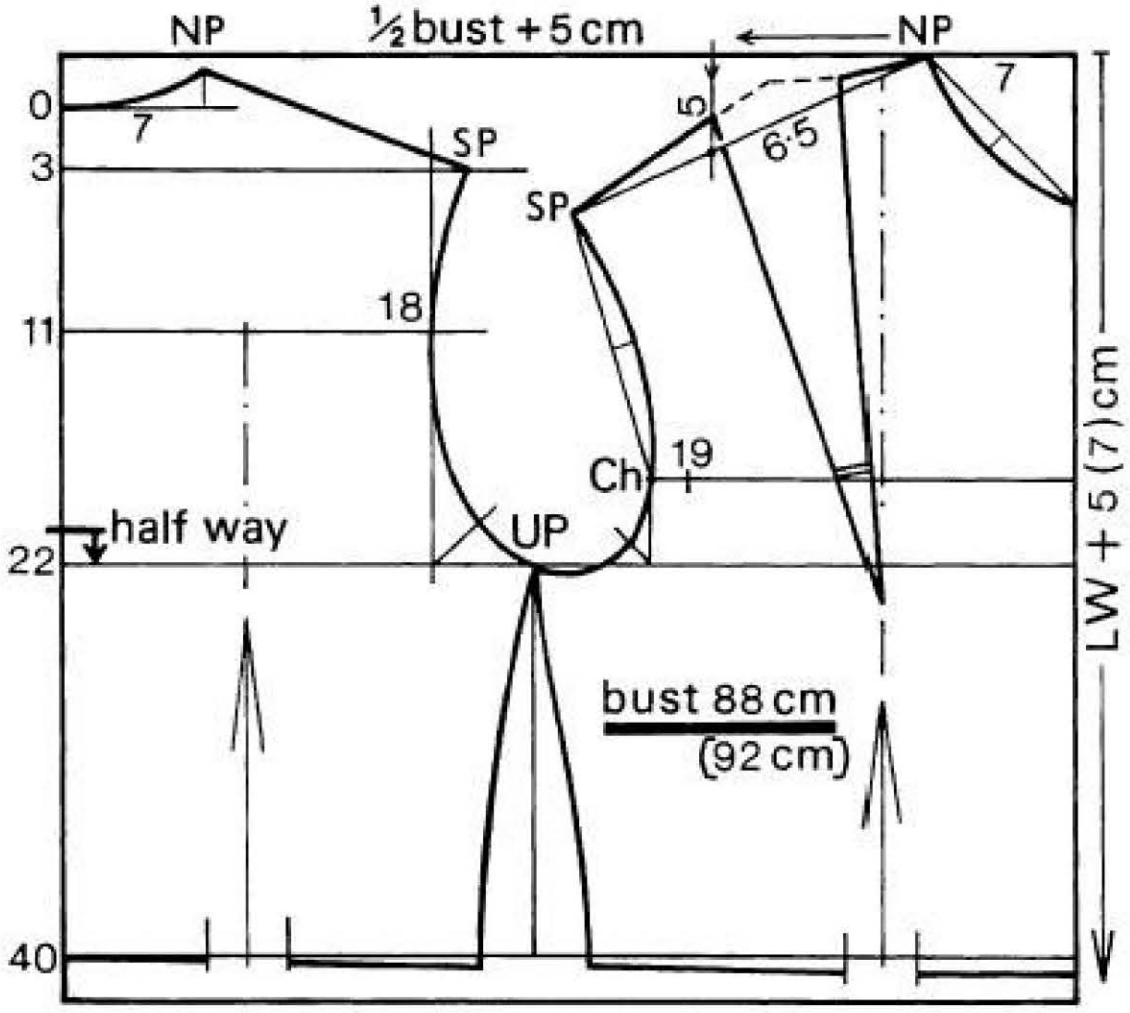
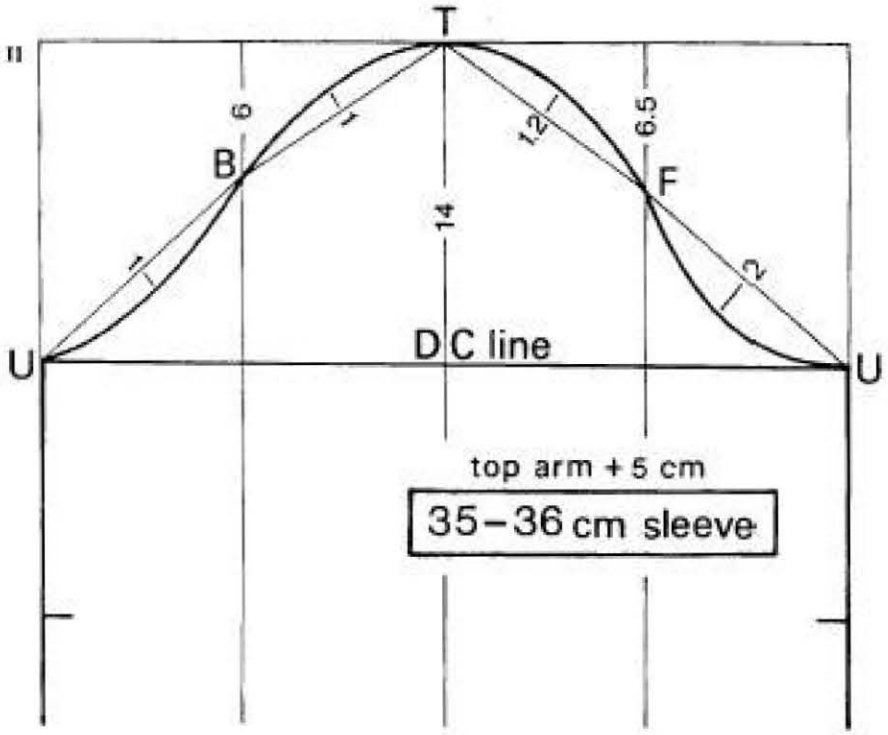


FIG. 1/APPENDIX I

APPENDIX TWO

SLEEVE ADJUSTMENTS

FIG. 1/APPENDIX II



DRAFT OF SLEEVE WITH A DEEPER CROWN

A sleeve with a deeper (or higher) crown can be produced by direct drafting. Though the basic method is followed, the proportions are changed so that *more height* above DC line and *less width* above the B–F level are obtained. This may serve as **a general method for varying the shape of the crown** whenever this may be necessary, whether to suit personal taste, a special style or the 'shoulder line' of the moment.

Fashion changes the 'shoulder line' and with it the setting-in of the sleeve which may be fitted just *below* the shoulder, exactly *on the shoulder bone* or raised *above it*: this naturally affects the depth of the sleeve head, which varies accordingly.

Method: Place the DC line 14 instead of 13 cm below the top edge of the rectangle. This, of course, reduces the length of the underarm seam, for while the *total* shoulder-to-wrist length remains the same, by giving more to the crown it is *re-distributed*. For point F measure 6·5 and for B 6 cm down.

N.B. F is 0·5 cm lower than B, which is usually 1 cm less than half of the Depth of the Crown.

Complete the crown as usual, guided by the four construction lines, passing 1+ cm above and below in the back and 1·2 and 2 cm in the front. Front and back of sleeve are now more alike in shape.

By lowering B and F further, until lines T–F–U and T–B–U are straight lines, a crown still narrower across the top can be obtained. It must be remembered, however, that a narrower crown requires adequate width across back and chest.

Adding depth to the crown makes it longer round the edge, often too long for the armhole (too much ease). Increase the armhole slightly. When this is undesirable, take in the sleeve at U, 0·5 cm on both edges.

Finally the sleeve head must be measured against the armhole, as usual, and Inset points B and F on the bodice adjusted accordingly.

The basic sleeve crown (page 67) should have a height sufficient to give a neat fit *on the top of the arm*, yet retaining enough *underarm length* to allow for movement and raising of arm. The balance between the two varies and can generally be established at a first fitting. Excessive depth of crown in a *basic* block may cause difficulties with some of the adaptations (Kimono, Drop-shoulder, etc.).

The basic crown, however, is not necessarily always the **'fashion crown'** of the moment. The latter may be higher by 1 cm or more, e.g. by 3–4 cm as at the time of the 'squared shoulder' fashion. It may also be lower. In all such cases it is advisable to have a **fashion sleeve block** in addition to the basic one.

There are many reasons why a sleeve crown *as drafted* may have insufficient depth. The crown may appear too short or too shallow: (a) because of the shape of the shoulder being higher or 'squarer' than usual; (b) because of an overdeveloped arm muscle; (c) because of too short a shoulder seam; (d) because of squaring (padding, stiffening) of shoulder; (e) because of excessive lowering of armhole; (f) because no provision has been made for a 'fashion shoulder line' (high fit); (g) because, irrespective of fashion, a higher sleeve fit is simply preferred. Crown variation is thus an important feature in sleeve designing and fitting and its basic principles should be clearly understood.

It is also possible to increase the height of the sleeve crown by adapting a sleeve pattern. Drop points U (top of the underarm) 1 cm: this makes the crown 1 cm deeper or higher. Re-draw the head of the sleeve, as shown in Fig. 2/App. II. With the length of the sleeve being the same when measured down the Middle or Top Line, the change affects only the depth of the crown and the shorter Underarm line at U.

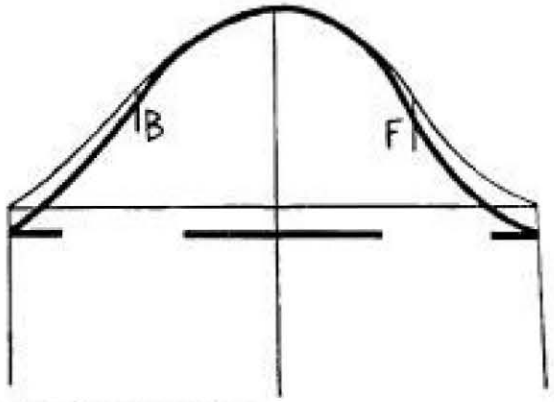


FIG. 2/APPENDIX II

TABLE OF SLEEVE PROPORTIONS

Size	Top Arm-TA	Sleeve Size	Crown Depth DC	Point B	Elbow Width	Wrist	Length of Arm
I	28 + 5	33	12·5	5 cm down	29	15	56
II	29	34	12·5	5+	29	15·5	57
III	30	35	13	5·5	30	16	58
IV	31	36	13	5·5	30	16·5	59–60
V	32	37	13·5	5·5+	31	17	60
VI	33	38	13·5	5·5+	31	17·5	61
VII	34	39	14	6	32	18	62
VIII	35 + 6	41	14	6	34	18·5	63
IX	37	43	14·5	6+	35	19	64
X	39/40	45/46	15	6·5	36	19·5	65

Length of Arm varies from approximately 56 cm (a short arm) to 65 cm (a long arm) and is not necessarily related to the size of the figure as a whole: it can be short or long for any size. Average—60 cm.

Elbow length (not given above) is usually 2–3 (4) cm longer than half of the length of arm.

Elbow width (with arm bent at elbow) is about the same as TA measurement in the smaller and medium sizes, but may be 3–5 cm less in large sizes.

Wrist is about half of TA measurement in medium sizes and even bigger in small sizes, but may be less in large sizes.

TABLE OF HALF AND QUARTER DIVISION OF MEASUREMENTS USED IN THE DRAFTS

	Bust	½ B	¼ B	Hips	½ H	¼ H	Waist	½ W	¼ W	xBack	½ xB	¼ xB	Chest	½ Ch	¼ Ch
I	80	40	20	86	43	21·5	64	32	16	33	16·5	8·5—	35	17·5	9—
II	84	42	21	90	45	22·5	66	33	16·5	34	17	8·5	36	18	9
III	88	44	22	94	47	23·5	68	34	17	35	17·5	9—	37	18·5	9·5—
IV	92	46	23	98	49	24·5	70	35	17·5	36	18	9	38	19	9·5
V	96	48	24	102	51	25·5	72	36	18	37	18·5	9·5—	39	19·5	10—
VI	100	50	25	106	53	26·5	76	38	19	38	19	9·5	40	20	10
VII	104	52	26	110	55	27·5	80	40	20	39	19·5	10—	42	21	10·5
VIII	108	54	27	114	57	28·5	84/6	42	21	40	20	10	43	21·5	11—
IX	112	56	28	118	59	29·5	88	44	22	41	20·5	10·5—	44·5	22·5	11·5—
X	116	58	29	122	61	30·5	92	46	23	42	21	10·5	46	23	11·5

ABBREVIATIONS AND REFERENCE LETTERS

CB—Centre Back
CF—Centre Front
NP—Neck Point
SP—Shoulder Point
UP—Underarm Point
HP—Hip Point
WP—Waist Point
ChP—Chest Point
LW—Length to Waist
TA—Top Arm
DC—Depth of Crown (in sleeve)
B—in sleeve, Back Inset point
F—in sleeve, Front Inset point
T—in sleeve, highest point (Top Line)
WR—Waist Reduction
SG—Straight Grain
RS—Right Side
WS—Wrong Side

The following are useful, particularly when taking down measurements:

B—Bust
H—Hips
W—Waist
xB—Back width (across back)
Ch—Chest width
LW—Length to Waist (down CB)
TA—Top Arm measurement

Points and letters frequently mentioned in the text which usually refer to:

Point X—highest point of the bust
Point D—the point of the Shoulder dart
Point E—Elbow point (or elbow level)

Fashion Supplement

by Ann Haggar

Blocks for Casual Wear

Increased leisure generally and the growth in active pursuits in particular have stimulated an expansion of the market for fashionable casual clothing. We must therefore consider how best to cater for this increasingly important market. We may see that the direct use of the Primary blocks, as illustrated in *Dress Pattern Designing*, rarely provides the best basis for the construction of casual clothing simply because they are closely fitted, whereas most casual wear is generously cut and relatively simple in shape.

There is obviously a need for a Secondary range of blocks since it is not enough merely to make additions to the Primary blocks – e.g. to the side seams – in an attempt to achieve the correct shape and size. These Secondary blocks must be enlarged generally to provide a proportionate increase suitable for the styles being developed from them. By utilizing the sound basic construction of the Primary blocks we can ensure that the new range of blocks will maintain the good fit in areas where alteration is not required, while retaining balance in areas which require loosening or enlarging.

The Simplified Bodice Block, drafted to fit an 88 cm bust (see page 126) has been chosen as a basis for these blocks as it is less refined than the Standard Bodice Block. It is therefore more suitable for adaptation into a looser, straighter silhouette, and may be constructed with a smaller bust dart (in this case 6.5 cm). This is a definite advantage since, in this case, the bust dart will be removed altogether, thereby promoting the 'flatter' look.

Main areas of alteration

1. The **bust dart** is usually superfluous and can be removed completely, promoting a 'flatter' less clinging look. (See **Note** below.)
2. **The main body area** needs widening to give a looser fit. Side seams are centralized.
3. **Shoulders** require lengthening to retain proportionality with the rest of the body area.
4. **Sleeve**: Since the armhole is enlarged it follows that the sleeve head will require corresponding adjustment. In addition, an adjustment is often made to shorten the crown height when a very casual 'shirty' appearance to the top part of the sleeve is required. As a result of this shortening, the sleeve must gain in width at the Depth of Crown level if the size of the sleeve head is to be maintained. The lower the crown and thus the wider the sleeve, the more casual the sleeve will appear.

Note: It is reasonable to assume that garments made from these 'flatter', loose fitting blocks will have a smoother fitting and generally more pleasing appearance on figures with less bust prominence. If blocks larger than size 92 cm bust are used it must be accepted that some 'draping' of fabric in the bust area will occur, caused by the bust prominence. The only way to avoid this effect is to convert the 'draping' back into a bust dart or an alternative controlling feature, e.g. tucks or gathers.

Once the Simplified Bodice Block has been converted into a 'Dartless' Bodice Block, it then serves as a basis for the Shirt and Jacket Blocks. These may then be further developed into Kimono and Raglan Blocks. The versatility of these looser cut, straight blocks is wide ranging; choose the most suitable block for the design regardless of the type of garment. It used to be the case that if you wanted to construct a shirt pattern you started with a Shirt Block. Be imaginative – if the dimensions of the Jacket Block are more suitable for the size of the shirt you have designed, then use it.

Dartless Bodice Block (with Shoulder/Bust Dart Removed)

In preparation for the removal of the bust dart it helps if it is first reduced to its minimum size, thereby beginning the process of loosening and straightening the bodice. Read section 6 on page 40. This adjusted bodice block may then be used as a basis for further styling, e.g. shirts, casual jackets, coats, etc.

Method

Refer to Fig. 1

Reducing shoulder/bust dart:

a. Outline the Simplified Bodice Block drafted to fit 88 cm bust (Appendix One). Outline *lightly* in area of armhole, end of shoulder and outer dart line. Measure 2 cm in from outer dart line and, using the block, pivot from dart point (X) to this new point and re-draw end of shoulder and armhole down to where it touches original armhole (about ¼ of the way down).

Refer to Fig. 2

Further adjustments:

b. Transfer new smaller shoulder/bust dart into a point ¼ of the way round the armhole.

c. Centralize side seams by measuring the width of the back and front bodices at underarm level; halve the difference between them; add the amount to the back and take it from the front.

d. Re-shape front armhole in area where 'dart' has been introduced (approximately 1.5 cm inside 'dart' ends). *The dart lines, now no longer serving as such, may be erased to avoid confusion*, leaving the front armhole enlarged.

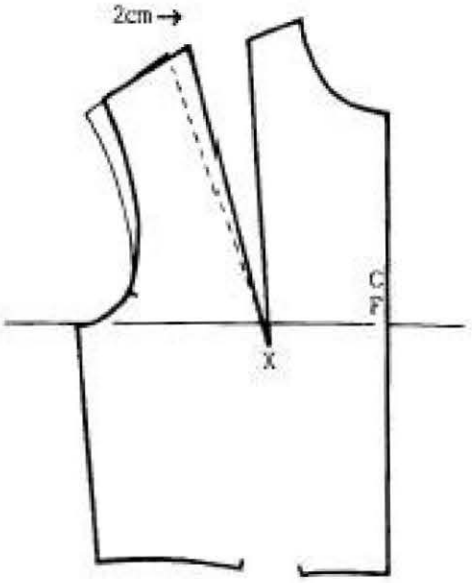


Figure 1. Reducing the shoulder/bust dart.

As may be visualized, the front armhole of this adjusted block will now be quite loose – even somewhat gaping. This is not surprising since it now contains a large part of the original bust dart. In the following patterns developed from this block the loose fitting armhole is a definite advantage, paving the way for sleeves of a more casual appearance than would be possible using a close fitting block.

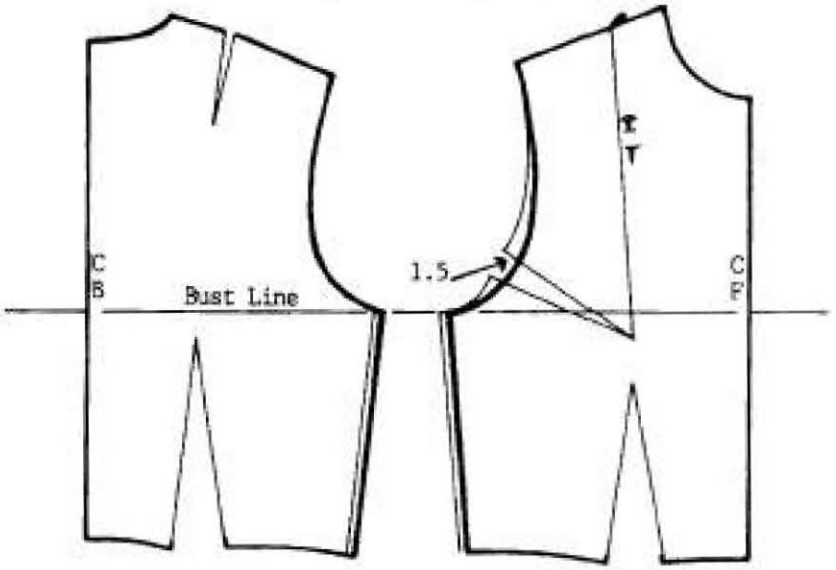


Figure 2. Preparation for the Dartless Bodice Block.

Loose Fitting Shirt Block

The method used to obtain the Loose Fitting Shirt Block has an affinity with that used to make the Blouse Block (see Fig. 1 on page 46) but there are important differences which will provide the right kind of shape for clothes of an even more casual appearance than those derived from the Blouse Block.

The Dartless Bodice Block, illustrated in Fig. 2 on page 134, will serve as a good basis for the Loose Fitting Shirt Block. The waist darts and side seam shaping will not be required for straight styles. However, it is useful to mark them on the block for the development of garments with fitted waists combined with wide shoulders when these are fashionable.

Method

Refer to Fig. 3

a. Place the Dartless Bodice Block with the back and front underarm/bust lines carefully positioned on a horizontal line drawn underneath on paper. Allow 5 cm between underarm points, ensure that CB and CF lines are parallel, and outline the blocks. (Allowing this extra 5 cm now provides a total of 20 cm ease over the whole bust measurement – a more suitable amount for loose styles than the 10 cm allowed on the original Simplified Bodice Block.) At UP square down for the new side seam.

Note: In this case the armhole has been enlarged by widening only. It may also be lowered if required. Turn to the Loose Fitting Jacket Block for instruction.

b. Lengthen 22 cm (or as required) below CB waist point. Square across to CF.

c. If the shoulder remains at its present length, it could look out of proportion with the newly widened body area. **Lengthen shoulders** in the following way:
Front shoulder – Square a line from CF through front SP continuing the line well into the back shoulder area. Measure 2.5 cm out and mark new SP. Connect shoulder line back to NP. This method allows a small height addition as well as extra length, both of which are appropriate for looser styles.
Back shoulder – Measure new front shoulder length and apply this measurement to back between NP and SP. *Notice that in equalizing the back shoulder length to the front, the back shoulder dart has been dispensed with.* It will serve no real purpose in any of the following patterns since they are all of a loose fitting nature. If, however, the dart is considered necessary – perhaps for figures with very prominent shoulder blades – it may be retained. (See **Note** below.)

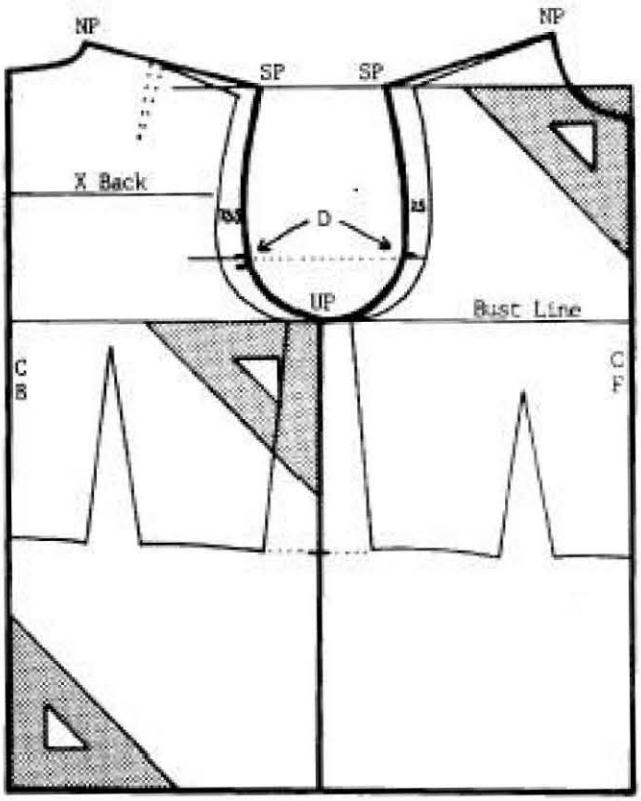


Figure 3. Loose Fitting Shirt Block.

d. **To re-shape armholes:**
Back – At X Back Line measure out 2 cm. Halfway between X Back and Bust Lines measure out 2.5 cm. Mark point D. Curve a line from SP through these last two points, down to UP.
Front – From SP curve a line down to point D which is 2 cm out from Bodice Block armhole. Continue round to UP.

Note: When retaining the shoulder dart it is important to consider its position when lengthening the shoulder seam. If left in its original position it could look 'drawn in' towards the CB. Take care when moving it towards the armhole that it does not stray too far from the shoulder blade prominence – the area it serves.

The outline for the back and front Loose Fitting Shirt Block is now complete. In preparation for a suitable sleeve, *measure the back and front armholes separately (from SP to UP) and make a note of the measurements on the pattern.*

Sleeve for the Loose Fitting Shirt Block

Take the Straight Sleeve Block (see pages 66 and 67) drafted to fit a 30 or 31 cm TA measurement and with a 13 cm Depth of Crown. Make the following adjustments to the sleeve head so that it will fit into the new armhole.

Refer to Fig. 4

e. Outline the Straight Sleeve Block marking the Top Line (which is also the Straight Grain Line) along with an indication of the Forearm and Back Lines. The Depth of Crown Line and Elbow Line will provide some horizontal control, so mark these in as well. Lower the crown 1.5 cm to compensate for the length added to the shoulder. (Theoretically this is only a partial compensation, but in practice if the whole amount were to be removed it would result in an over flattened sleeve head.) Re-draw the crown from point B through lowered point T round to F in a smooth line. *Measure the new sleeve head and keep a note of the measurement for comparison with the new armhole measurement.*

f. Cut out the sleeve and slash pattern along the four dot-dash lines from the crown down to but not through the wrist.[1]

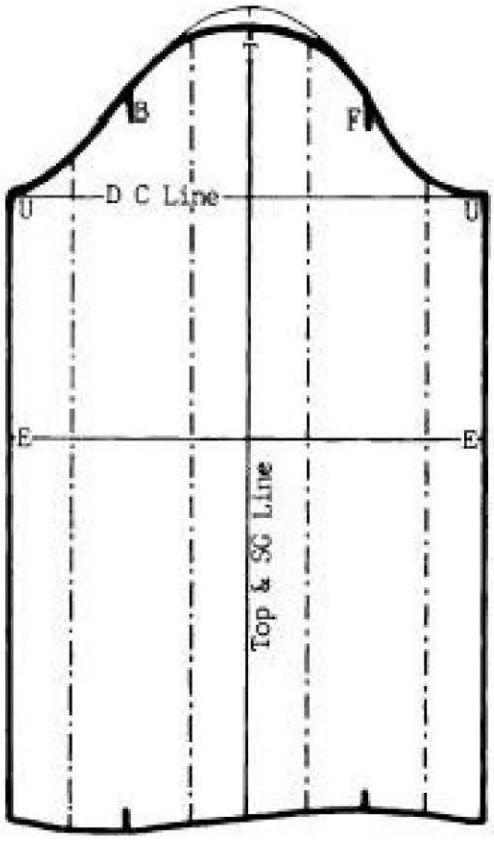


Figure 4.

Refer to Fig. 5

g. Place slashed pattern onto a sheet of paper marked with Top and D C Lines. Pin or paste the centre section of sleeve, lining it up on Top and D C Lines. Now calculate the difference between the back armhole measurement and the back sleeve head measurement. Add on 0.5 cm for easing.[2] Allow ⅓ of this total measurement in between each cut section on the back sleeve and the final ⅓ beyond point U. *To complete the back sleeve head*, refer to the enlargement in Fig. 5. Join up the gaps between cut sections with a smoothly curved line running midway between points of cut sections. Finally, *measure this new line and check that it fits into the back armhole* with 0.5 cm to spare, which will be eased in during sewing. Place balance marks to match point D on back armhole. The extra 0.5 cm for ease should be positioned between points D and T.

Repeat for front sleeve.

Notes:

1 In this case the extra width has been added in at the head tapering down to the wrist, thereby creating a slightly shaped sleeve. This gives a more flattering shape to these widened sleeves.

2 With this type of 'flattened' sleeve head a total of 1 cm sleeve head easing is usually quite sufficient for most fabrics. Soft, open weave fabrics may need slightly more, and harder firm woven cloth may need a little less. Even more fundamental is the fact that since this type of sleeve does not mould itself to the shoulder bone prominence, it does not require the shaping that more sleeve head easing would provide.

3 It is a wise precaution to write the size (e.g. 'to fit 88 cm bust' or 'size 12') on these generously cut patterns since the measurements of the patterns are no longer a guide to the size of body they will fit. (This is essential business practice.)

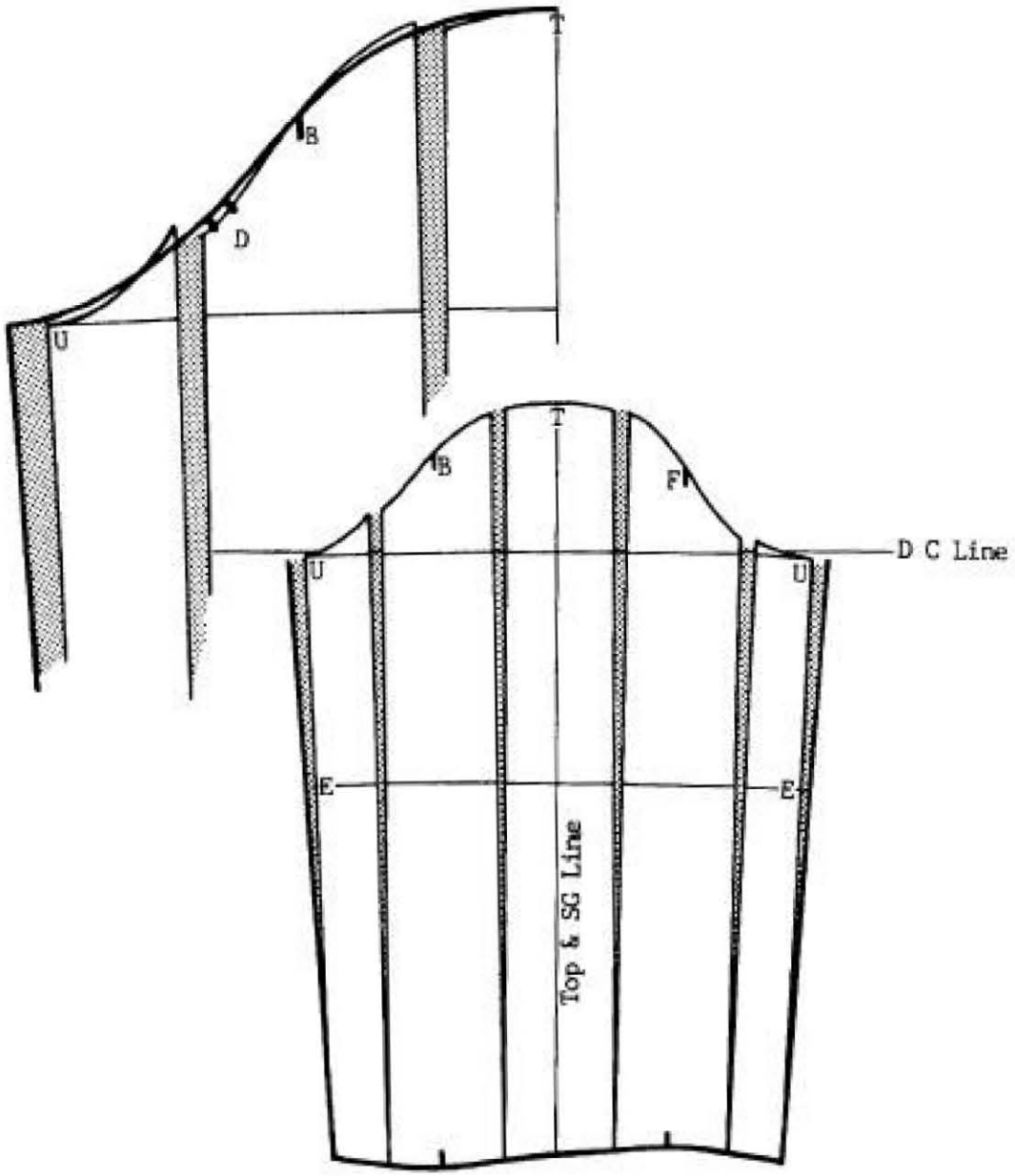


Figure 5.

Loose Fitting Jacket Block

The Loose Fitting Jacket Block is suitable for casual jackets and since it is such a simple shape its use can be extended to many different types of garments, from shirts (when these are required by fashion to be cut extra large), to coats (namely the unstructured type), to beachwear, leisurewear, lingerie and even work garments. The versatility of these straight cut blocks is wide ranging. In this supplement the Jacket Block will be further adapted to provide generously cut Raglan and Kimono Blocks.

The Jacket Block has a similar shape to the previous Shirt Block but is a good deal larger, especially in the following areas:

Shoulder length	Bust and hip width
X Back	Depth of armhole
Chest width	

It may therefore be assumed that as a result of these enlargements the garments will have more than sufficient ease when worn over other clothing. The Jacket Block may be adapted directly from the Dartless Bodice Block (Fig. 2) or from the Shirt Block (Fig. 3) if this has been completed. It is quicker to work from the Shirt Block, since some of the work has already been done. Both methods are described.

Method 1 – Jacket Block adapted from the Dartless Bodice Block

Refer to Fig. 6

a. Outline the Dartless Bodice Block, carefully positioned on a horizontal line drawn on paper allowing 11 cm between UPs. Ensure that CB and CF lines are parallel. (This will provide approximately 32 cm ease over the whole bust measurement compared with 10 cm on the Simplified Bodice Block and 20 cm on the Loose Fitting Shirt Block.) Halfway between UPs square down for new side seam. On this line mark the lowered armhole (jacket UP) 5 cm (or more or less as required) down from point a.

b. Lengthen 22 cm below CB waist or longer if required, and square across to CF.

c. **Lengthen shoulders** to be proportionate with the widened body area:
Front shoulder – Square across from CF through front SP, continuing line well into the back shoulder area. Measure 5.5 cm out and 1 cm down from squared line and mark new front SP. Connect shoulder line back to NP. Note the difference in height between Bodice Block and Jacket Block shoulder. This provides more room in shoulder area suitable for looser cut styles.
Back shoulder – Measure new front shoulder and transfer this measurement to the back, dropping SP in the same way as on the front (1 cm). Notice that the back shoulder dart has been dispensed with: see Shirt Block instructions, para c, page 135.

d. **To re-shape armholes**, firstly draw a line midway between X Back and Bust Line, and continue this across to the front armhole.
Front – From new SP draw a smooth curved line down to point D (4.5 cm out from bodice armhole) and round to new UP, missing bodice underarm point by 1.5 cm.
Back – From new SP draw a line down to point D (5 cm out from bodice armhole) and round to new UP, touching on bodice underarm point.

e. **Adjusting neckline for jackets** – When using this block for jacket styles, or indeed for any garment to be worn over another, it is advisable to increase the neck size for styles with or without collars. The amount will depend on the style chosen, but it is sufficient here to give instructions for the minimum increase to avoid a 'choking' fit.
Therefore lower CB neck 0.5 cm, widen back and front NPs 0.5 cm on shoulder seams, and drop CF neck 1 cm. Connect these points into a new neckline, either by drawing a free-hand curve or by placing the Bodice Block neckline centrally between the points and using it to re-draw the curve.

Method 2 – Jacket Block adapted from the Loose Fitting Shirt Block

(This block will be identical to that adapted from the Dartless Bodice Block.)

Refer to Fig. 7

a. Outline the Loose Fitting Shirt Block carefully positioned on a horizontal line drawn on paper, allowing 6 cm between UPs. Ensure that CB and CF lines are parallel. Halfway between UPs square down for new side seam. On this line mark lowered armhole (jacket UP) 5 cm down from point a. (This measurement may be adjusted according to design.)

b. Length as Shirt Block, or as required.

c. **Lengthening of shoulders:**
Front – Extend beyond shirt SP by 3 cm. Mark new SP.
Back – Repeat instructions for front.

d. **To re-shape armholes** – See instructions for Jacket adaptation Method 1.

e. **Adjusting neckline** – See instructions for Jacket adaptation Method 1.

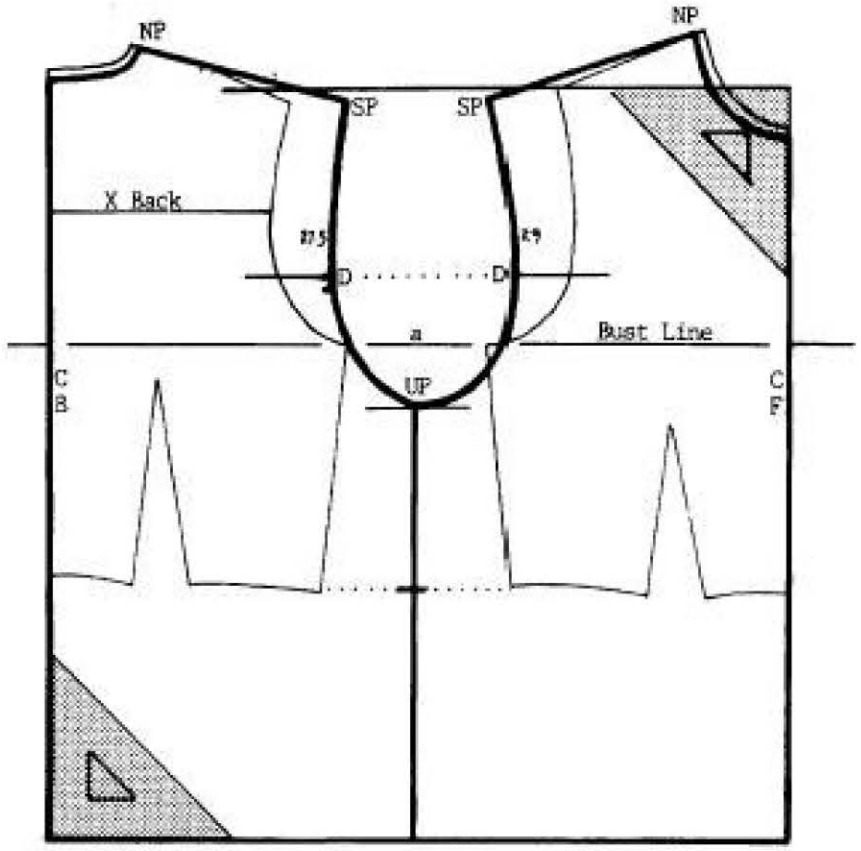


Figure 6. Loose Fitting Jacket Block adapted from the Dart-less Bodice Block.

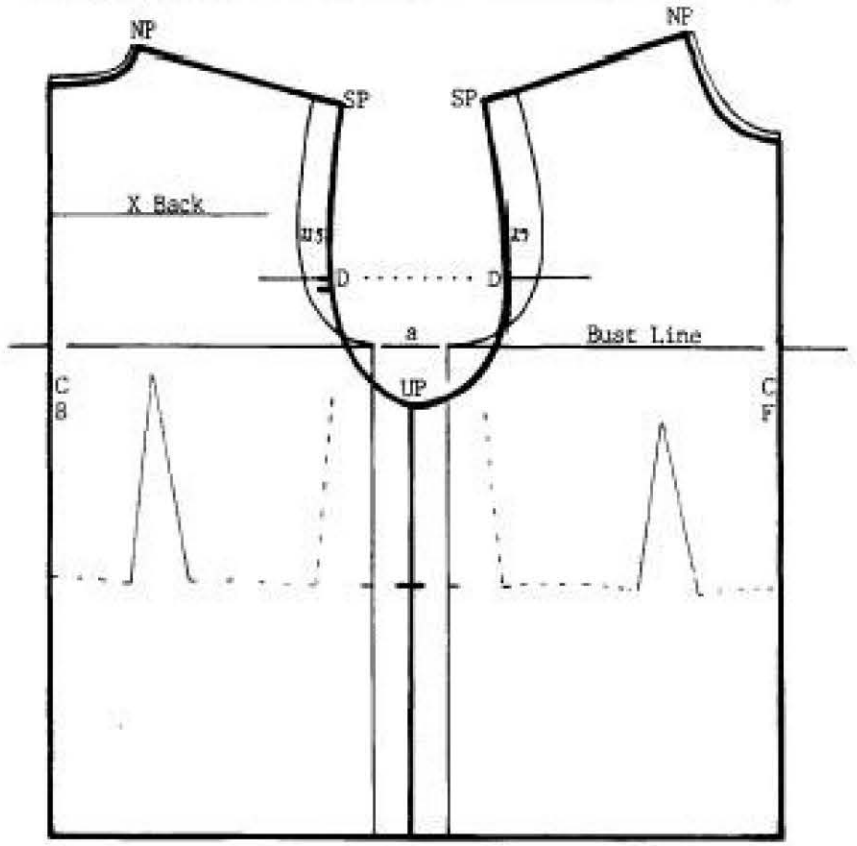


Figure 7. Loose Fitting Jacket Block adapted from the Shirt Block.

Jacket Sleeve Block

Take the Straight Sleeve Block (see pages 66 and 67) drafted to fit a 30 or 31 cm TA measurement and with a 13 cm Depth of Crown. Make the following adjustments to the sleeve so that it will fit into the new armhole.

Refer to Fig. 8

f. Outline Straight Sleeve Block. Mark in Top Line, DC Line X to X and Elbow Line along with an indication of the Forearm and Back Lines. Lower the crown by 2.5 cm around to points B and F. This corresponds to the lowering of the shoulder. Extend DC Line by amount added to each (back and front) side seam of jacket (in this case 5 cm). Measure the adjusted back sleeve head from point T to widened underarm point (X) passing through point B. Make a note of the measurement. Repeat with the front. Compare these measurements with the back and front armholes respectively. Invariably the sleeve will need enlarging still further to fit the jacket armhole.

g. Therefore, re-apply tape measure on its edge from T to underarm seam on back, *dropping tape until the back armhole measurement plus 0.5 cm for ease is registered on underarm seam*; mark point U. Re-draw crown along line of tape measure on its edge from U to B. Repeat this whole operation on front sleeve. This line will eventually become the new sleeve head. Draw in a dot-dash line in readiness for slashing, from about 3 cm inside points B and F down to about 3 cm below points U.

Note: It is important that back and front points U are on the *same horizontal level* so that the new underarm seams will be of equal length. If front point U ends up *higher* than back point U, then move front point U *inwards*, thereby maintaining the armhole measurement plus 0.5 cm for ease. Conversely, if front ends up *lower* than back, then move point U *outwards*. Cut out pattern on new sleeve head line, *discarding parts above new line.*

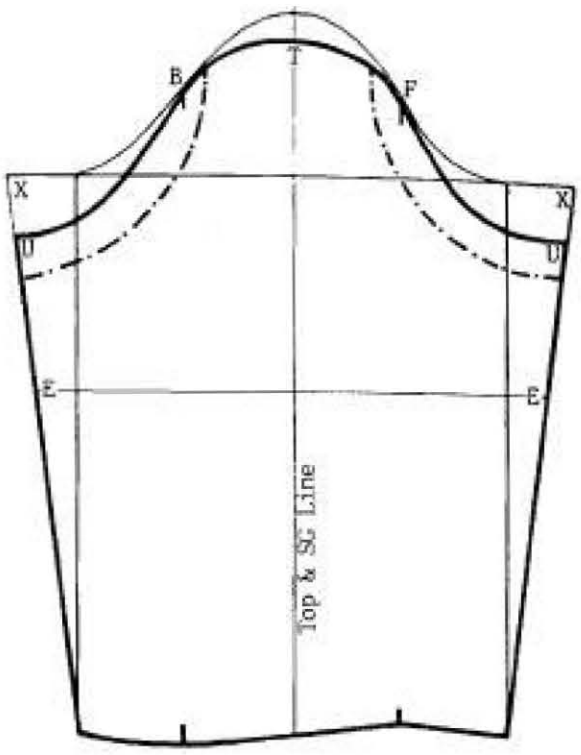


Figure 8.

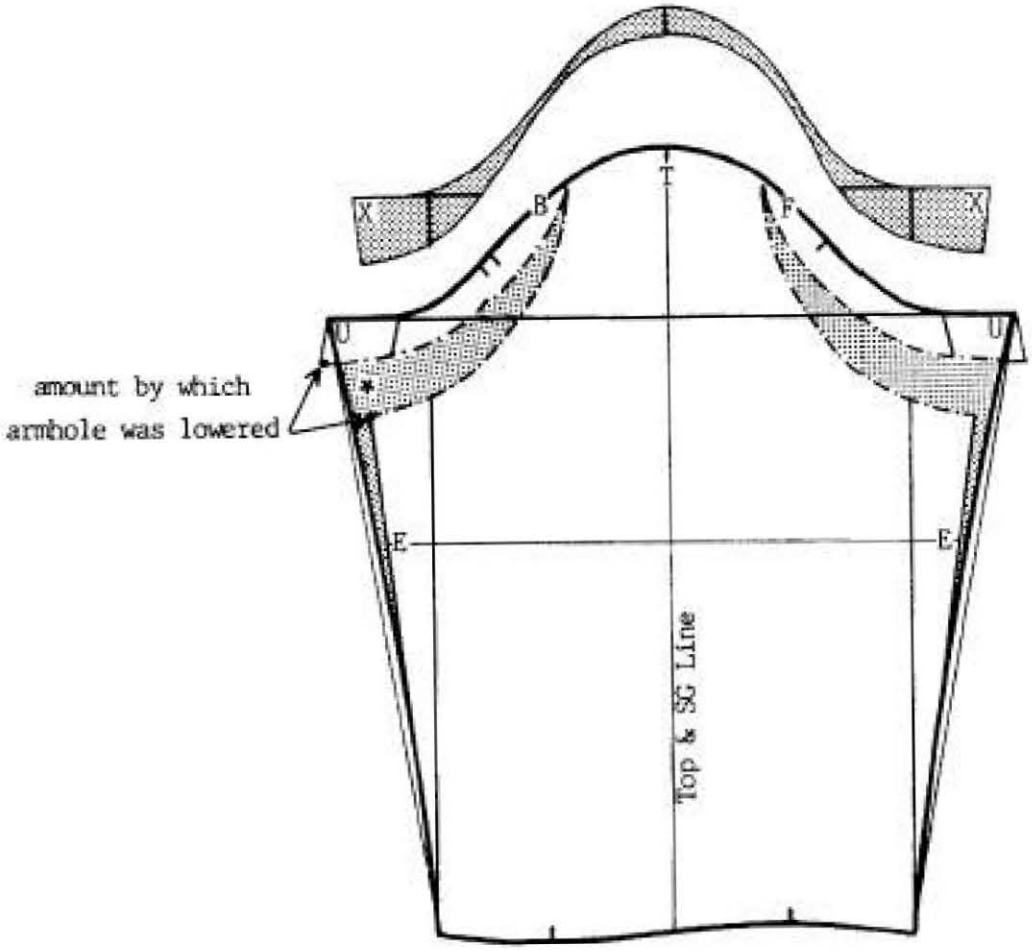


Figure 9.

Refer to Fig. 9

h. **Lengthening of underarm seams** (to compensate for loss of length on side seams) – Slash pattern on dot-dash curve and raise by amount that jacket armhole was lowered (see * area on Fig. 9). Measure the amount from each corner of slashed line. Secure by pasting. Sleeve head may need re-drawing at points B and F to fill in dents caused by slashing. Connect new underarm line from U down to wrist. This may be ruled to start with, but it is usually *more successful if slightly curved*. Check that underarm seam lengths are equal. Place balance marks on crown to match points D on jacket armhole (Figs. 6 and 7), positioning the 0.5 cm ease in the upper crown area i.e. between balance marks and T.

Note: If these instructions are followed, approximately 12 cm crown height will result. However, the gap between the main sleeve and cut sections (* area on Fig. 9) may be *increased to give a flatter headed, more casual looking sleeve* which, as a result of the increase, will also be *wider*. Conversely, *a decrease* in the gap would result in a *higher crowned, narrower and more regular fitting sleeve* with a more tailored look, suitable for medium to heavy weight fabrics.

Caution: If the latter effect is required, take care not to lose too much length on the underarm seams – a consequence of allowing a smaller space between the gaps. *The main reason for the space is to replace the length lost when lowering the armhole and it is unwise to make the space less than ½ of the amount lowered.*

Simple Kimono and Raglan Blocks

The Loose Fitting Shirt or the Loose Fitting Jacket Blocks may be further adapted to provide a Kimono and Raglan Block. Whether the shirt or jacket is chosen will depend on the degree of fit required. The instructions are interchangeable between shirt or jacket. It must be stressed that the Kimono and Raglan Blocks offered here are of a simple shape, being derived from the Loose Fitting Blocks, and are a suitable basis for casual clothes and for a more formal cut when a 'big' silhouette is fashionable. The subject of kimono patterns and that of raglan sleeves is thoroughly explored in *More Dress Pattern Designing* Chapters II, III and IV, and makes interesting and informative reading. The subjects are taken to a very advanced stage, illustrating a wide variety of styles.

Kimono Block Adapted from the Loose Fitting Jacket Block

When starting to adapt an ordinary back, front and sleeve block to a Kimono Block, certain adjustments have to be made. For example, centralizing of seams and redistribution of darts. These adjustments have already been made on the Shirt and Jacket Blocks and they may therefore be used without delay.

Method

Refer to Fig. 10

a. On a very large sheet of paper, 150 cm × 100 cm, outline the back Jacket Block in the top right-hand corner. Include X Back, Bust Line, waist level and armhole balance marks.

   Note: If a fitted or semi-fitted waist is a possibility, include original darts and side seams as a guide, but be prepared to move them according to design.

b. At SP mark a point 2 cm upwards and from it draw a second shoulder line up to NP. Along this line place front Jacket Block and complete the outline. Mark in Bust Line, waist level and armhole balance marks.

c. At UPs mark 1 cm divisions down side seams on back and front.

d. Fit jacket sleeve into armhole cavity *until each point U equalizes and touches on side seam*. Failure to position the sleeve correctly will result in underarm seams being unequal in length. Outline the sleeve and include the Elbow Line. Mark Top Line position at *wrist only* and then, removing sleeve block, *join this point to NP to form the shoulder/sleeve seam* (also the dividing line of kimono). Place a balance mark at SP and elbow and then trace off back jacket and sleeve and finally front jacket and sleeve.

Refer to Fig. 11

e. **To round off underarm** – In this case the underarm has been rounded between elbow and waist level. At 45° from UP measure 6.5 cm out. Connect into a rounded line. This line may be adjusted as required. *The important point is to create a smoothly rounded line and to make back and front patterns identical.*

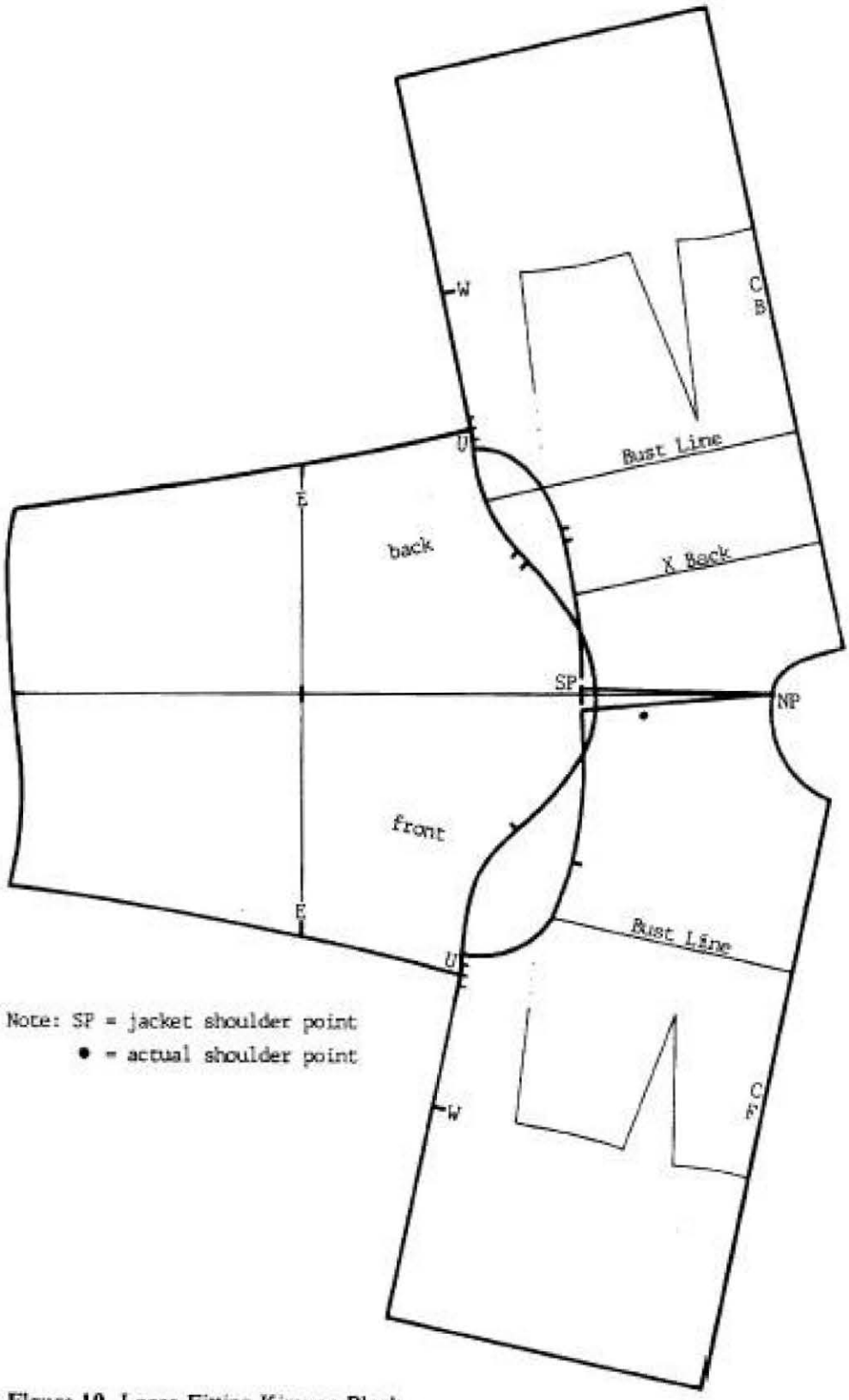


Figure 10. Loose Fitting Kimono Block.

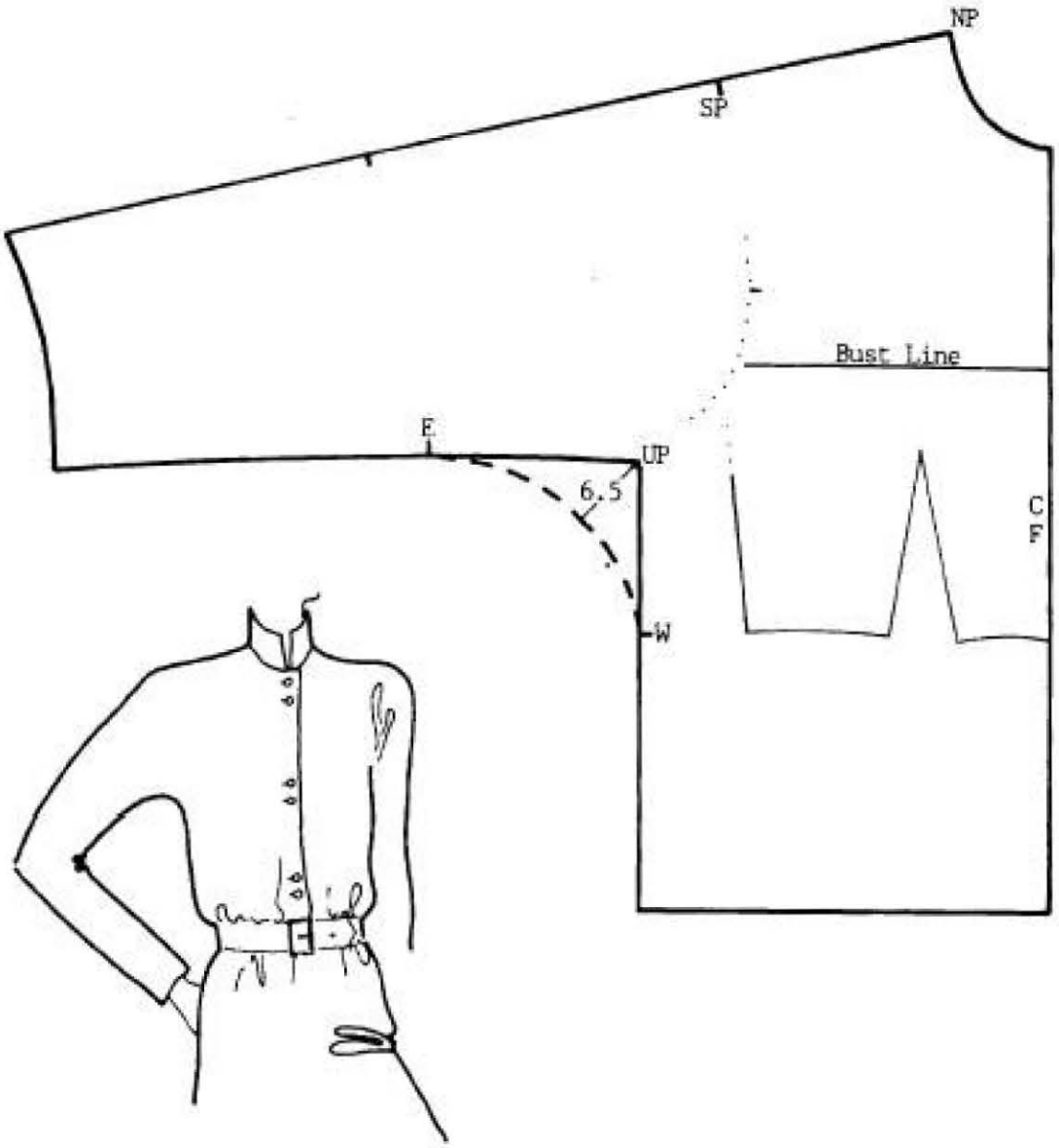


Figure 11.

Raglan Sleeves

To describe it simply, a raglan is a sleeve which extends across the shoulder or chest area to the neck of the garment. Underneath the arm it is usually cut like an ordinary set-in sleeve, either high or low according to fashion or individual requirements. To cut a pattern for such a sleeve, first decide on the position and shape of the raglan seam. Draw in the shoulder portion and join it to the sleeve. There are many ways of making this connection according to the shape and fit of the raglan required, but one rule must be followed throughout if the balance of the block being adapted is not to be lost. That is: *when positioning the sleeve head against the armhole, match the balance marks together.*

Note: When working from large, loose fitting blocks, raglan seams will not benefit from the subtle shaping that is appropriate to more fitted styles. Any seam shaping should be purposeful and bold. If plain raglan seams are required, keep them straight.

Raglan Block adapted from the Loose Fitting Jacket Block

Before starting make sure that blocks being used are clearly marked with armhole and sleeve head balance marks as per instructions for Jacket (or Shirt) Block.

Refer to Fig. 12

a. Outline front Jacket Block. Include Jacket SP and original SP (to indicate position of actual shoulder bone), Bust Line, armhole balance mark (D) and waist level.

b. **To join sleeve at the correct angle to jacket, measure** 2 cm up from point D and mark front pivoting **point.** Matching the balance marks (point D), pivot sleeve **on** armhole until it touches pivoting point and crown **is 2** cm away from jacket SP. *Outline the entire sleeve whilst in this position.*

c. **On back jacket armhole** mark pivoting point **by** measuring 2 cm up from the topmost balance **mark,**

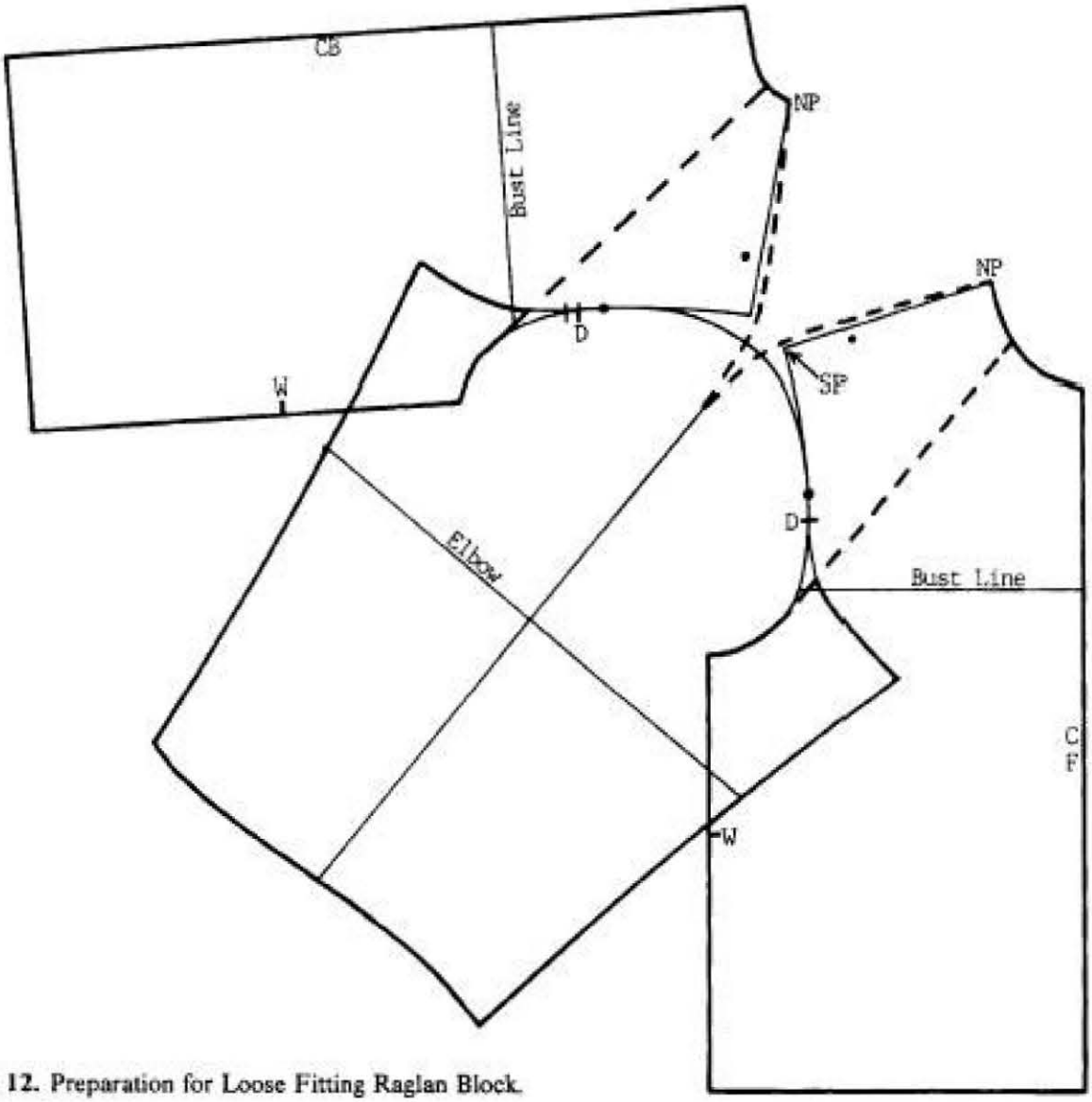


Figure 12. Preparation for Loose Fitting Raglan Block.

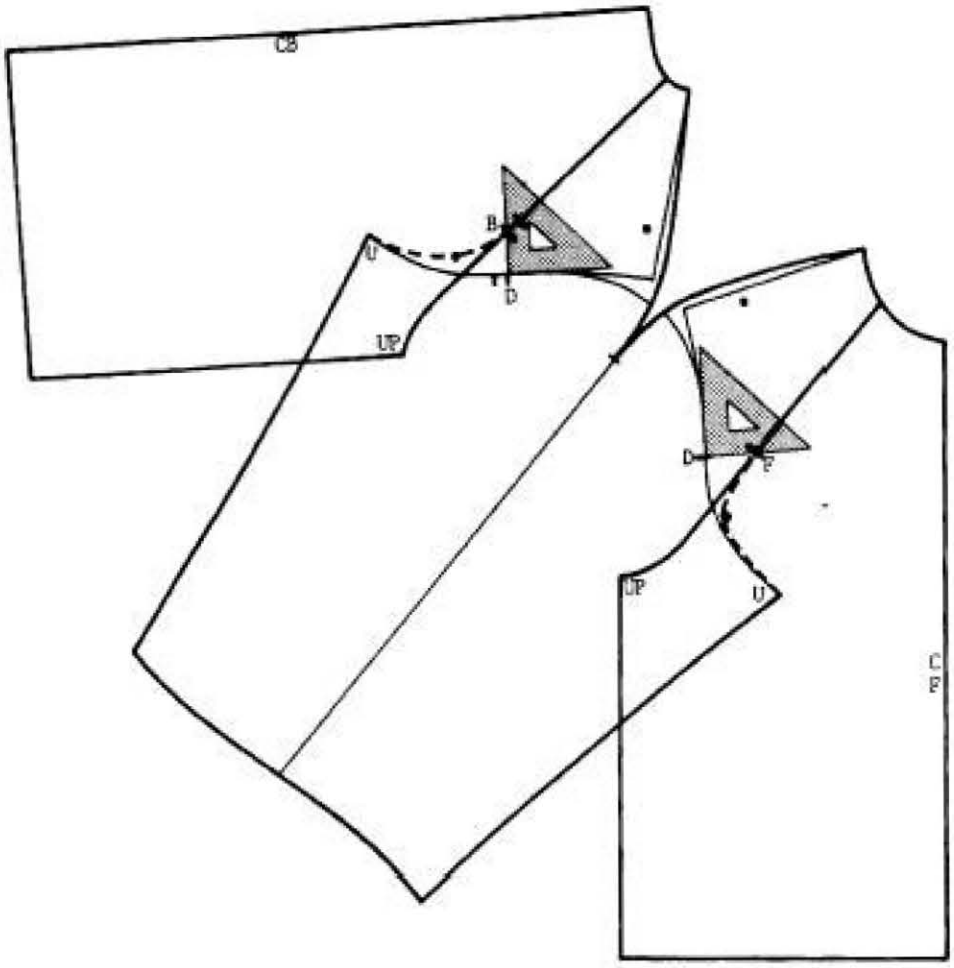


Figure 13.

which coincides with the front point D. Mark this same point on sleeve. *Position the back jacket so that it matches the positioning of the front jacket with the sleeve.*

d. **Drawing in the raglan lines** – On this type of loose fitting, low armholed block, the raglan sleeves are more suitably placed when they converge low down on the jacket armhole. This will help promote the casual look.

Back – Start the raglan seam approximately 2.5 cm away from NP and rule a line down to armhole just past the Bust Line where it will blend smoothly with the lower part of jacket armhole.

Front – Mark raglan seam about 5 cm away from NP. (By making the front raglan section wider, the seams are better balanced when viewed from the side and the whole raglan shoulder area tends to feel more comfortable in wear.) Rule a line from this new point down to just below the Bust Line, where it will blend into the underarm area of the jacket. This completes the outline of front and back patterns.

e. **To complete the shoulder seam**, raise jacket SP by 0.5 cm on front and back to soften line and curve down to a point approximately 7 cm down from top of crown (along Top Line).

Refer to Fig. 13

f. Square across from line of Jacket Block armhole and from balance marks (D) to raglan lines. Mark points B and F, the new balance marks. From these points curve the underarm areas of the sleeve down to points U (dash line). *The front sleeve curve must be more cut away than the back i.e. more sharply curved*, this being in keeping with the general shaping of ordinary set-in sleeves. It serves the corresponding body area which is more hollow at the front than at the back.

Refer to Fig. 15

g. **To finalize the sleeve,** measure F–U and B–U. These seam lengths will invariably be shorter than F–UP and B–UP. They must, of course, be equalized. Slash front sleeve from sharpest part of curve between F–U down to but not through wrist. Spread the amount required to equalize with F–UP on armhole. Repeat on back. Trace off patterns.

The final sleeve pattern in Fig. 15 may be cut in one piece with the shoulder dart providing shaping in that area. This type of one piece sleeve is quite suitable for light to medium weight soft fabrics, as the sewing of darts presents few problems in such fabrics. However, in medium to heavy weight fabrics which are likely to result in darts that 'poke', a seam along Top Line would be preferable. Indeed, this may be a requirement of the design anyway. The seam may be straight or shaped as in Fig. 16.

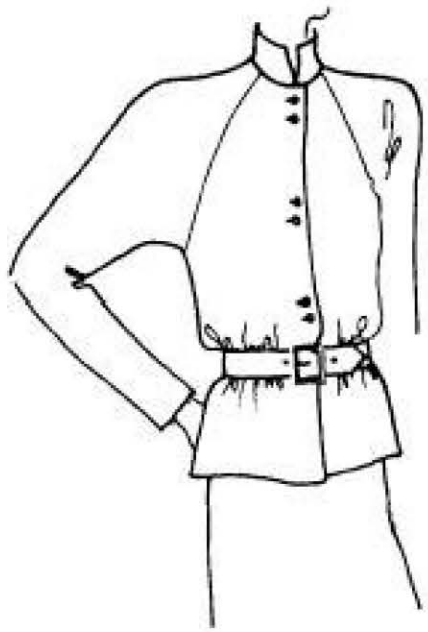


Figure 14. Loose Fitting Raglan Sleeve.

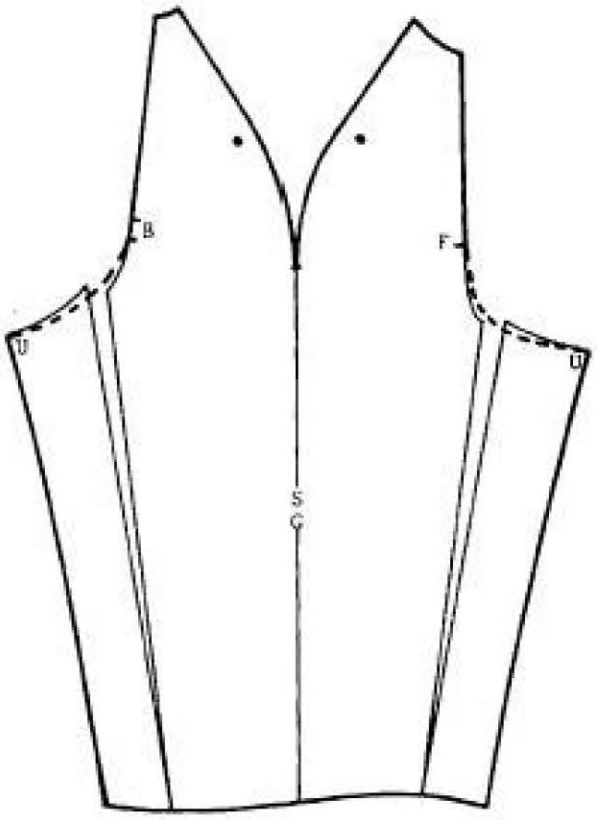


Figure 15.

Note: The underarm area of the sleeve may be adjusted to give more freedom of movement by raising points U as shown in Fig. 17A. Notice the width gained when the underarm seams are re-drawn from points U to wrist points. If a closer fit is required, the points U will have to be lowered as in Fig. 17B. Shortening the underarm seams in this way will restrict movement slightly but will result in a tidier fit (no underarm draping). Note the reverse effect of that in Fig. 17A – a narrowing of sleeve width. In both cases smooth the armhole curve just below balance marks to remove bumps caused by these adjustments.

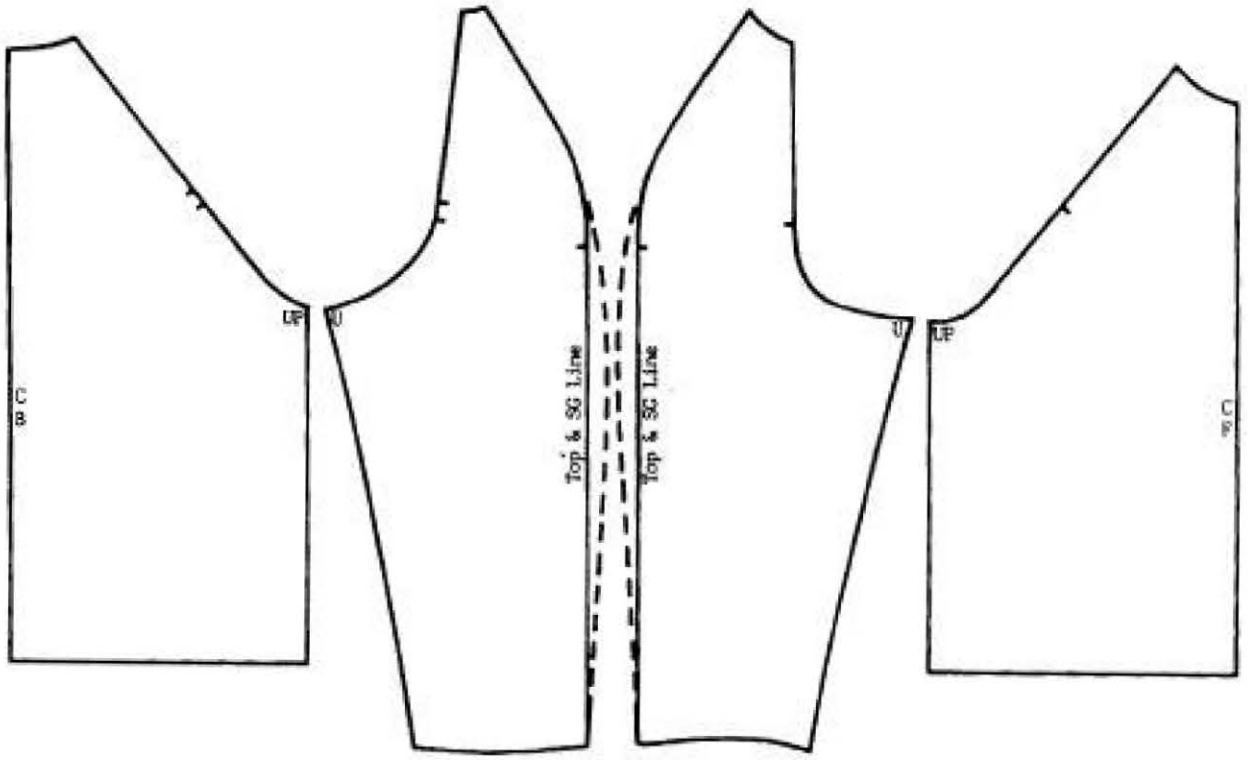


Figure 16.

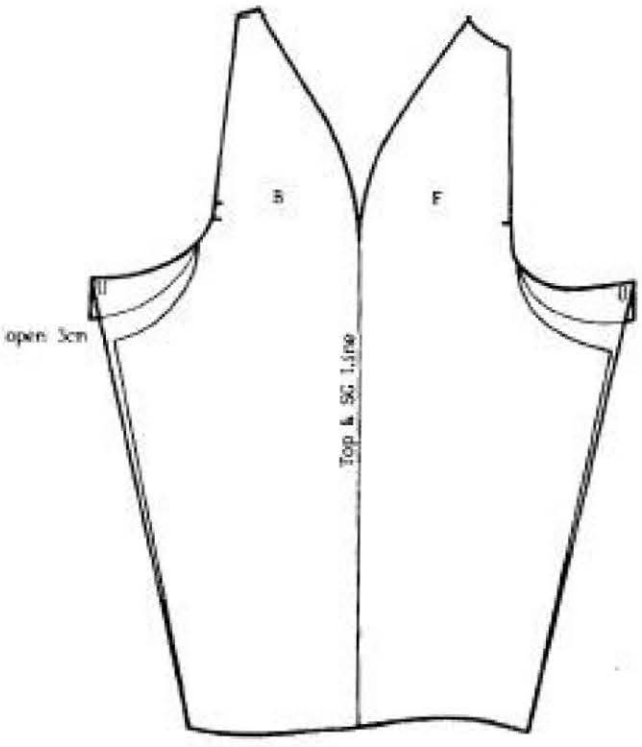


Figure 17A.

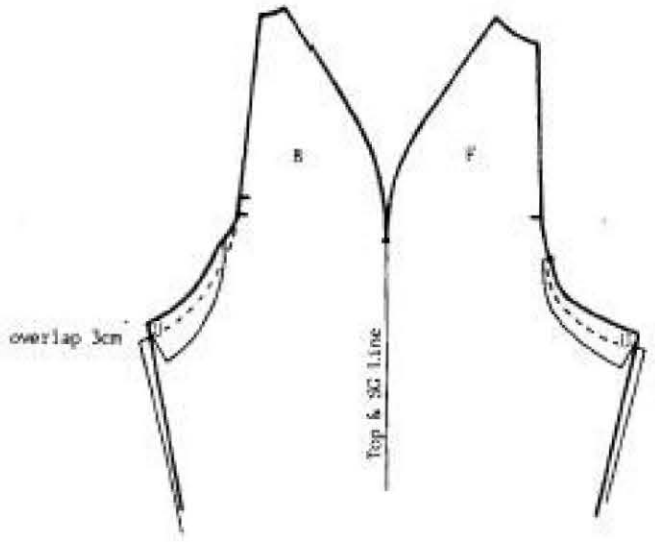


Figure 17B.

Shoulder Pad Allowances

All basic blocks, including this range of loose fitting blocks, are cut to fit the natural shoulder line. If pads are to be inserted suitable additions to shoulder area and sleeve must be made. To assess the amount of addition measure the thickness of the pad at the shoulder end. Add this amount into the back and front shoulder. A corresponding adjustment must be made to the crown height so that the sleeve will fit into the armhole as before.

Adjustments to a pattern with set-in sleeves

Refer to Fig. 18

a. **Shoulder** – Slash pattern in shoulder area as shown, i.e. approximately 5 cm down from SPs and up to NPs. Open each section by amount of pad thickness. Redraw armholes from SPs to balance marks, joining gaps caused by slashing.

b. **Sleeve** – Slash down centre of sleeve approximately 5 cm, and from centre to the balance marks on back and front sleeve head. Open the sections so that *the space on either side of T equals the amount added into back and front armholes*. The crown, in the areas of the balance marks, may need re-shaping.

c. Check sleeve head measurement against armhole measurement.

Note: These principles apply to loose fitting *and* close fitting styles with set-in sleeves. In the case of a very close fitting bodice, the underarm area of both bodice and sleeve may need to be lowered slightly notwithstanding the amount already added to shoulder height for padding. This should dispel the tendency for the garment to cut into the figure in this area.

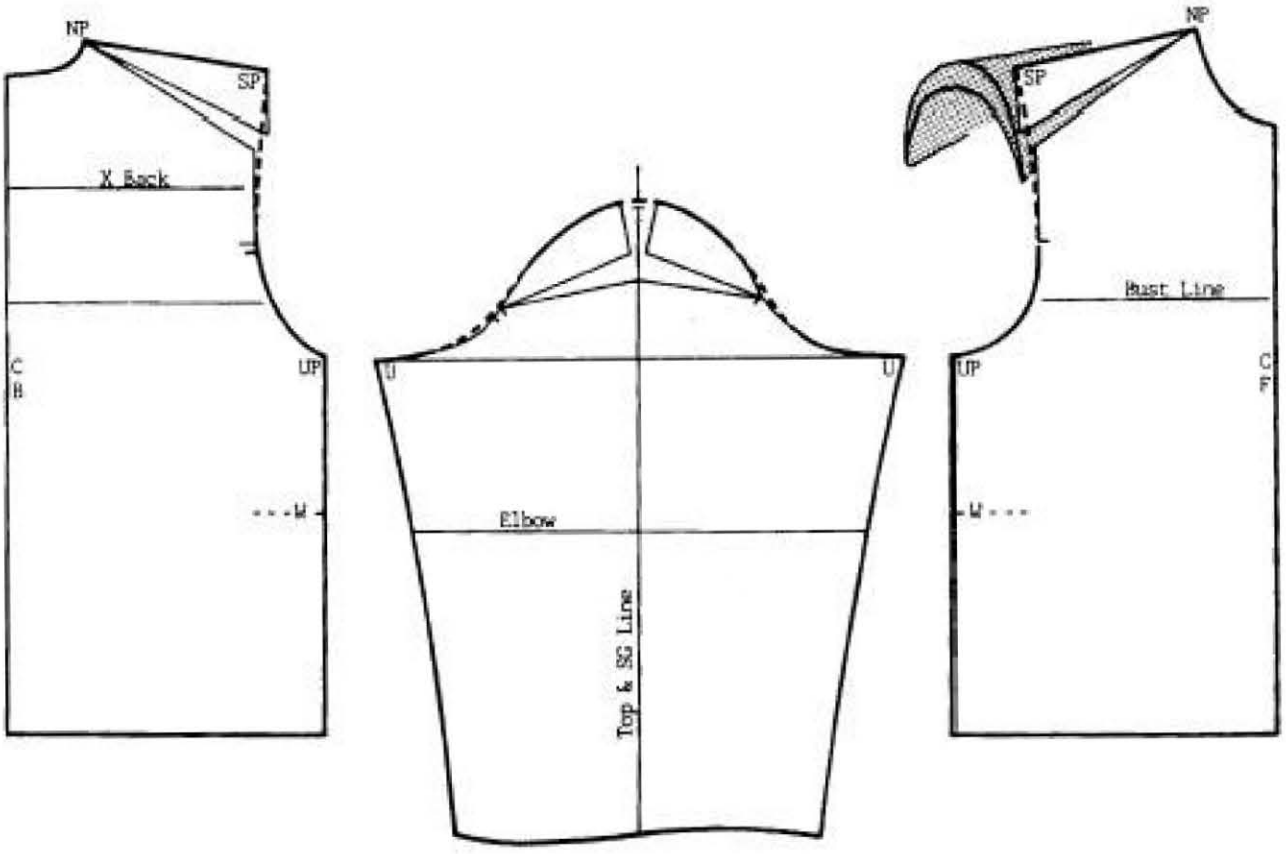


Figure 18. Shoulder pad allowances for set-in sleeves.

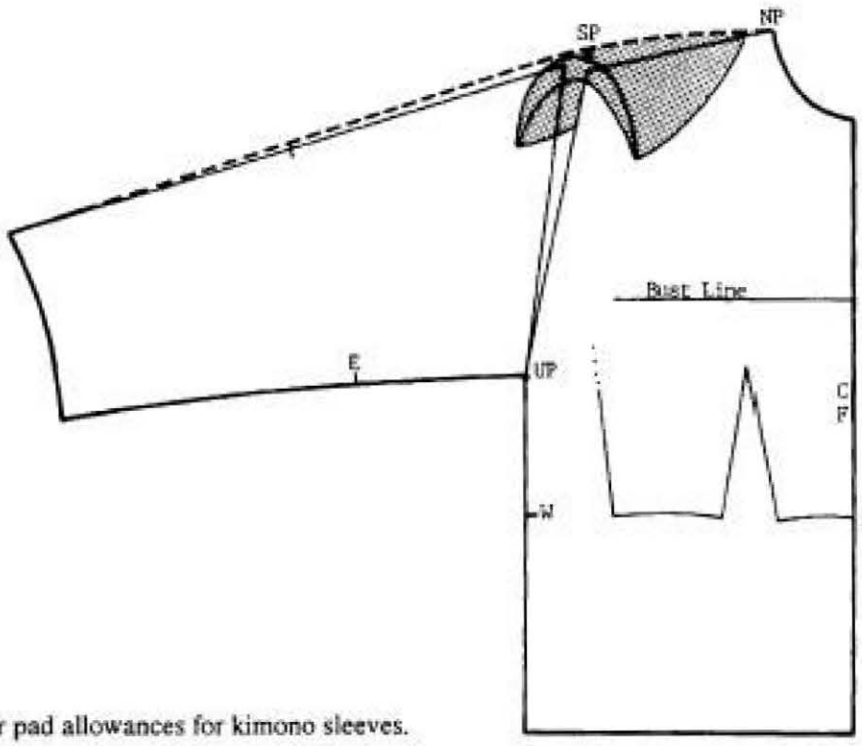


Figure 19. Shoulder pad allowances for kimono sleeves.

Adjustments for kimono sleeves

Shoulder pad allowances are easily made in kimono sleeved patterns since the shoulder and sleeve are cut in one piece.

Refer to Fig. 19

a. Slash pattern from SP to, but not through, UP. Spread 2 cm (or amount of thickness of pad) and secure new angle of sleeve.
b. Re-mark SP 2 cm above original, and re-draw top arm seam from NP through new SP and down to wrist.
c. The alteration to the back is identical.

Adjustments for raglan sleeves

Shoulder pad allowances are easily made in raglan sleeves since the shoulder and sleeve are cut in one piece. The back and front bodice or jacket patterns are not affected and are therefore not needed for the alterations.

Refer to Fig. 20

a. Slash the sleeve as shown (notice that the slash line is directed towards the most prominent part of the shoulder seam) and add in the thickness of the pad.
b. The shoulder line then needs to be raised (dash line) by a corresponding amount, thereby completing the three-dimensional alteration, comparable to the kimono block adjustment.

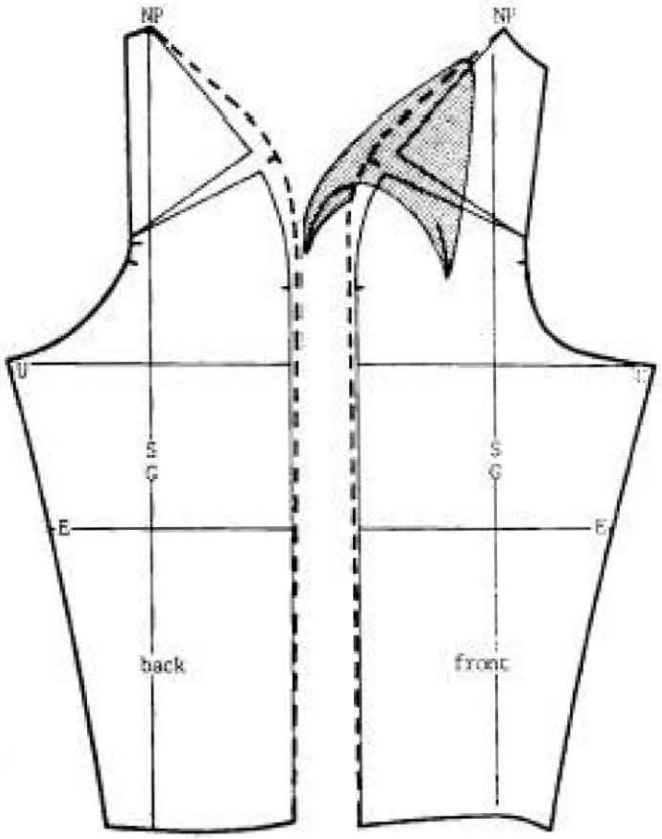


Figure 20. Shoulder pad allowances for raglan sleeves.

Plain Straight Shirt Cuff with Strap Opening

Read the general information on cuffs on page 75.

Cuff up to 6 cm deep and to fit average wrist of 17 cm. (If a deeper cuff is required, measure arm at this level and substitute this for wrist measurement.)

Cuff size:
Length = 17 cm + 3 cm ease + 2 cm button wrap + 2 cm buttonhole wrap = 24 cm
Depth = (maximum of) 6 cm × 2 (these cuffs are always cut double).

Note: Shaping at bottom of sleeve has been retained to provide some extra length over the elbow bone and to allow the sleeve to dip attractively towards the back.

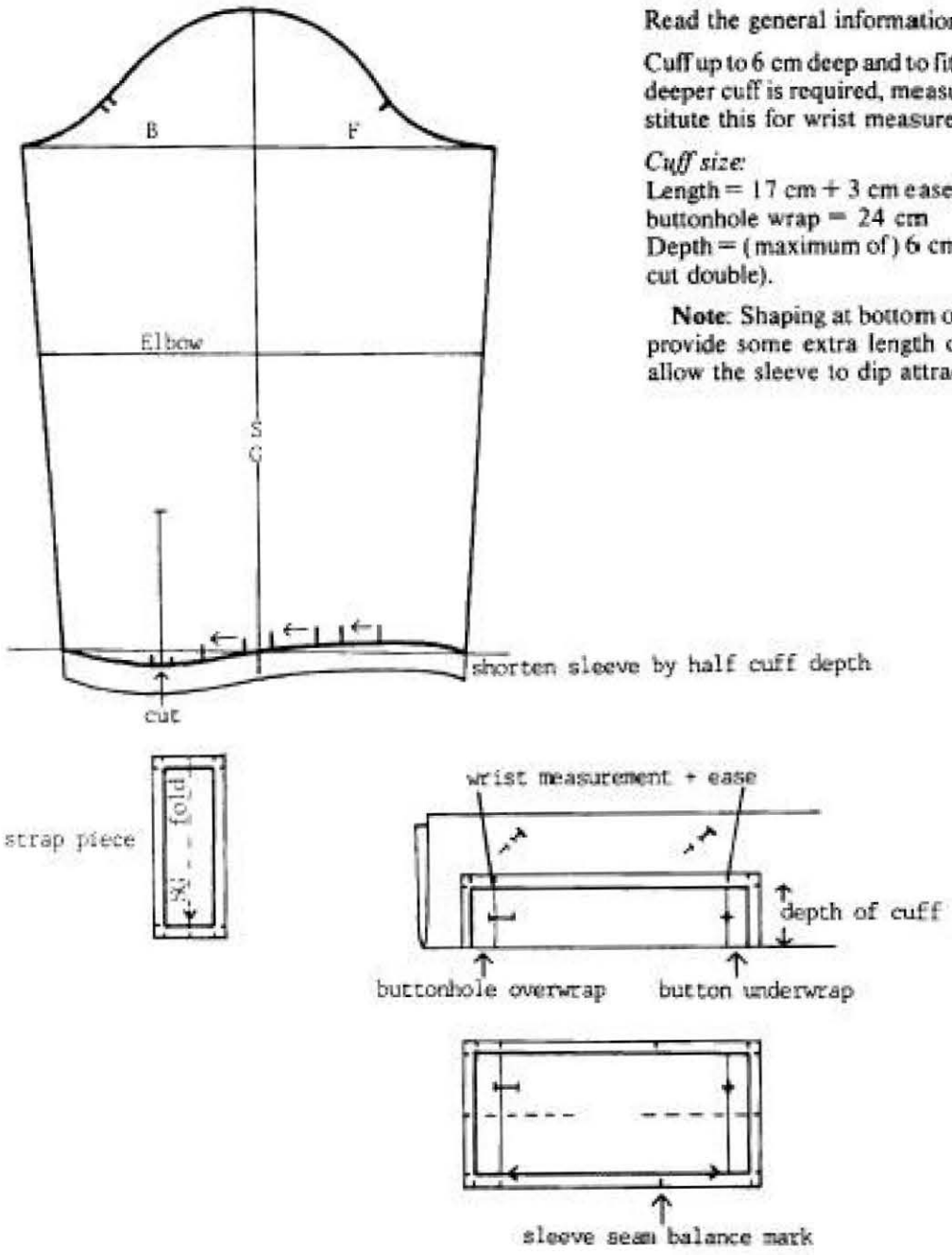


Figure 21. Straight shirt cuff.

Method

Refer to Fig. 21

a. Decide on cuff depth. Shorten sleeve by half this amount. (The remaining half provides for pouched effect.)

b. Divide back half of sleeve in two by creasing pattern; mark position for sleeve opening. Decide on length of opening (minimum 10 cm). Place seam turning notches on either side of cutting line.

c. **Draft pattern for strap piece** – Decide on its width (this should be proportionate with cuff depth). Length – as opening. Add seam turnings.

d. **Draft a rectangle for cuff** using length measurement × depth as above. Add seam turnings (1 cm all round is ample).

See Fig. 22

e. Using length measurement of cuff, plan as many pleats as required to reduce sleeve to cuff size. Remember that strap piece will become part of sleeve bottom circumference. Allow for this when calculating size of pleats. Notice position and direction of pleats – close to and *towards* opening. This ensures that they will be seen in wear – not hidden on inside of wrist. Alternatively, bottom of sleeve may be gathered or tucked to fit cuff.

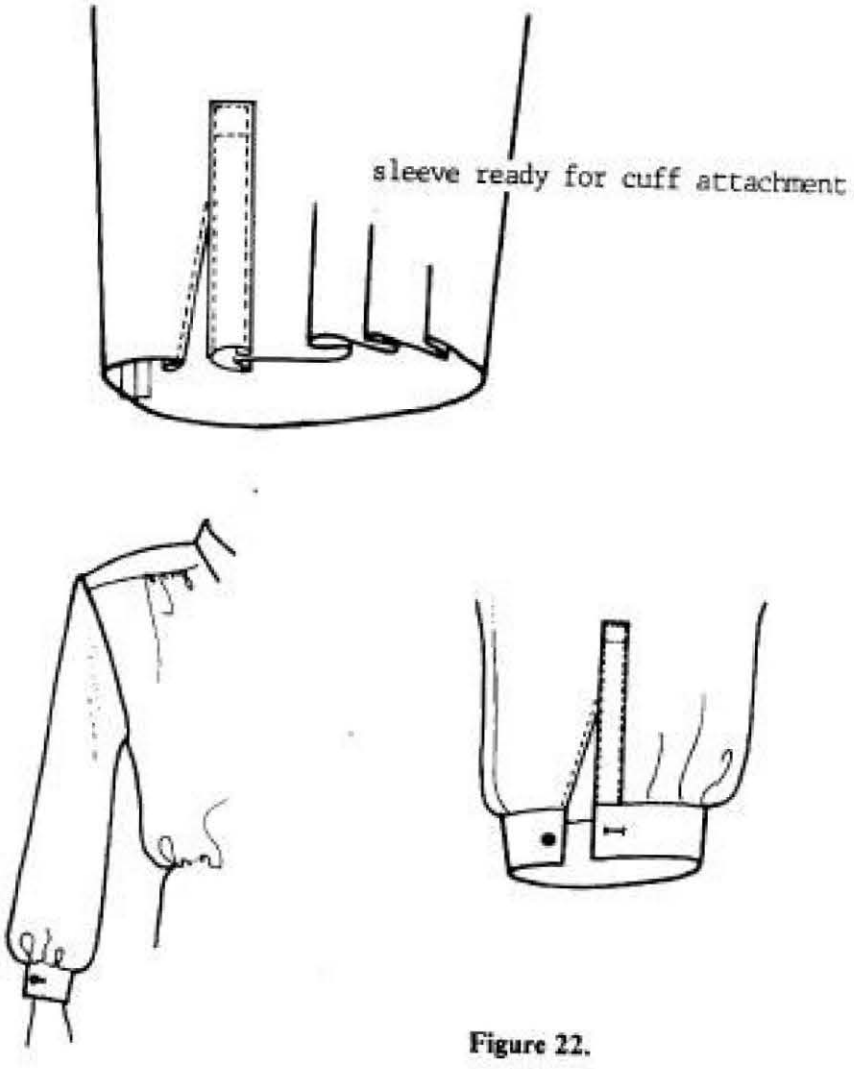
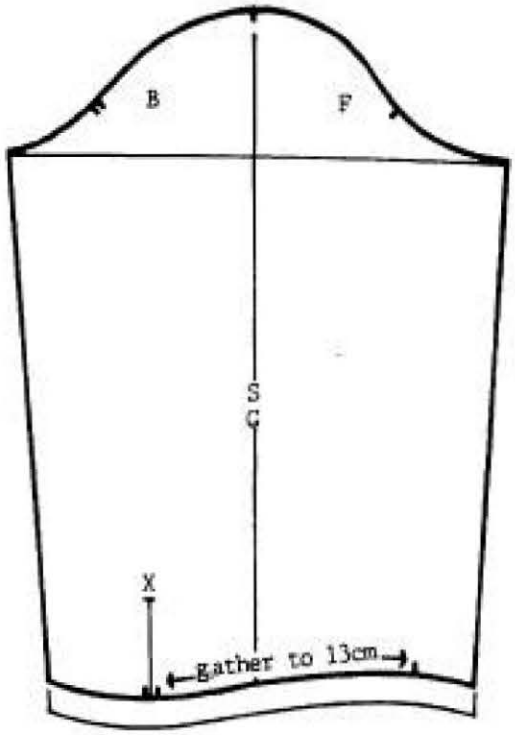


Figure 22.

Double Turn-Back or French Cuff with a Continuous Bound Placket

Cuff up to 6 cm deep (measured when doubled) and to fit average wrist of 17 cm. (If a deeper cuff is required measure arm at this level and substitute this for wrist measurement.)

Cuff size:
Length = 17 cm + 3 cm ease + 1.5 cm button stand allowed at each end = 23 cm
Depth = finished depth quadrupled (these cuffs are cut double and then folded over).



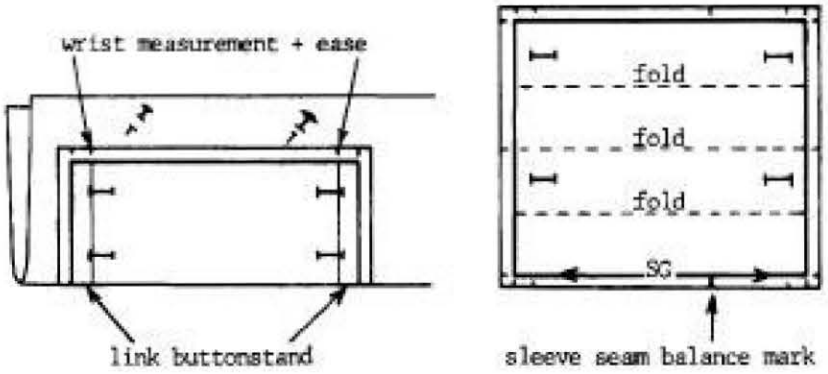


Figure 23. Double turn-back or French cuff.

Method

Refer to Fig. 23

a. Decide on folded depth of cuff. Shorten sleeve by half this amount.

b. Divide back sleeve in half for opening position. Decide on length of opening – with a continuous strip arrangement it looks unattractive to have too long an opening (maximum 10 cm, but 6–8 cm looks better). Place seam turning notches on either side of cutting line.

c. **Draft pattern for continuous placket** – Twice the length of the opening plus 2–3 mm (a little extra length is taken up when sewing corner) × twice finished width. This width is not usually more than 1 cm since this type of finish is generally applied to lightweight fabrics. Nowadays this is usually cut on the straight grain for easier cutting and sewing. Add seam turnings.

Refer to Fig. 24

Placket sewing procedure – RS of placket to WS of sleeve. Stitch as in Fig. 24A. Bring placket over to RS of sleeve. Press seam turning into position and edge-stitch into place. When completed, folded end of placket (X) is prone to tearing. Strengthen with a diagonal line of stitching (see Fig. 24B).

d. Draft a rectangle for cuff using length and depth measurements as stated above. Add seam turnings.

e. Plan reduction of wrist circumference on sleeve to suit design. In this case the sleeve is gathered and the pattern has been labelled accordingly.

f. **Buttonhole placement** – Four buttonholes are placed as marked on pattern, (see also Fig. 24C). Closure is by linked buttons (e.g. thread chain link) or by cuff links.

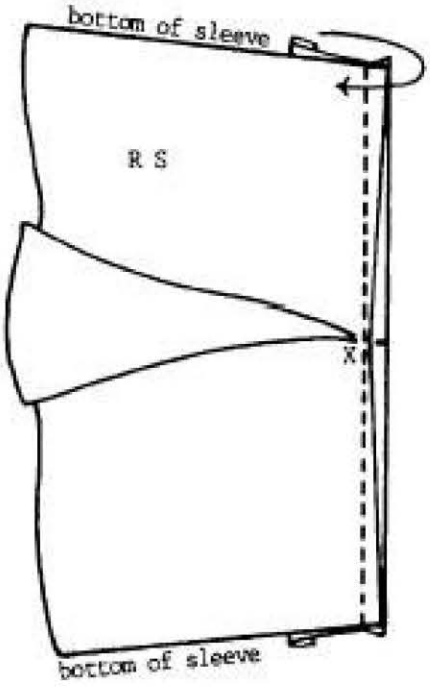


Figure 24A.

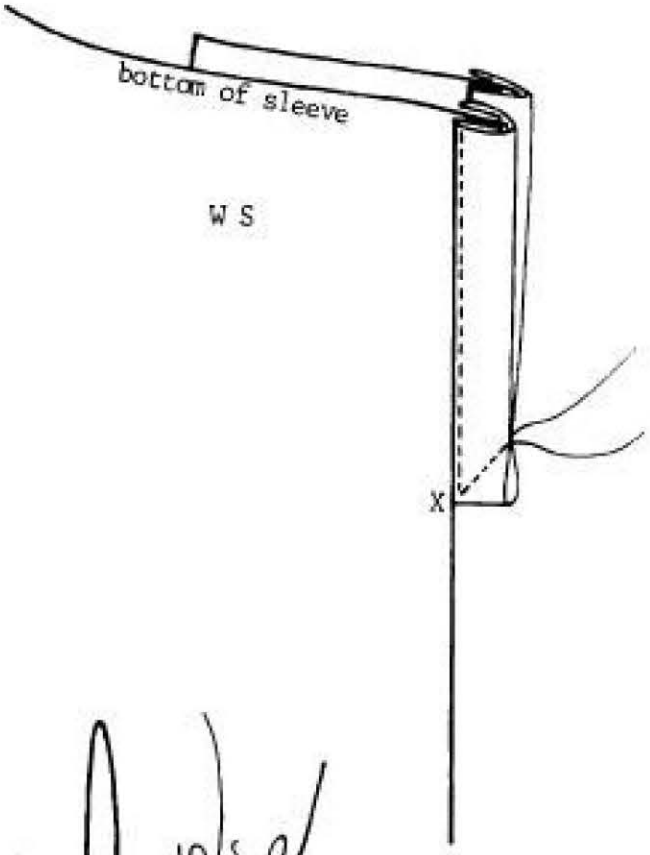


Figure 24B.

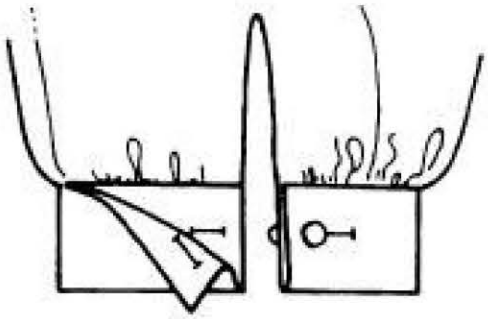


Figure 24C.

Tight Fitting Cuff with Slit Opening

This type of full sleeve with a tight fitting cuff may be cut from the tight fitting or semi-shaped sleeve or, as here, from the Straight Sleeve Block.

Cuff depth: As required for design. (This example is based on a depth of 15 cm, and to fit an average wrist of 17 cm.) Cuff may be pointed on hand.

Method

Refer to Fig. 26

a. Decide on cuff depth. Measure arm at this level (see Fig. 25) and add 1–2 cm ease (the thicker the fabric, the more ease is needed). Keep a note of the measurement. At the same depth on sleeve block draw a line parallel to wrist shaping (line a).

b. Measure this cuff depth line on block. Measure wrist of block. Subtract these two measurements from arm and wrist measurements to find out how much to reduce cuff section. Divide each measurement by 5 and plan the reduction as in Fig. 26A. Mark height of wrist opening (7 cm) on back cuff seam and square across (on SG Line) to place a matching point on new front seam.

c. Trace off cuff area – Fold out unwanted sections and trim off unwanted underarm pieces (Fig. 26B).

d. The underarm seam area of cuff will need some refinement (see Fig. 26C). Fold cuff so that underarm seam is uppermost, and wrist opening notches match. Correct the stepped levels by drawing new curves between them.

e. Open out pattern and **draw in pointed part of cuff** 5 cm long, or as required, to just short of underarm seam lines as in Fig. 26D.

f. **Lengthen sleeve to provide pouched effect** a little more on back sleeve than on front (see dash line in Fig. 26A). The sleeve may also be widened now if required. Place balance marks to control gathering. Cuff would be cut double, enabling opening edges (including slit opening at inside wrist) to be faced. Closure by button and loop at bottom of slit.

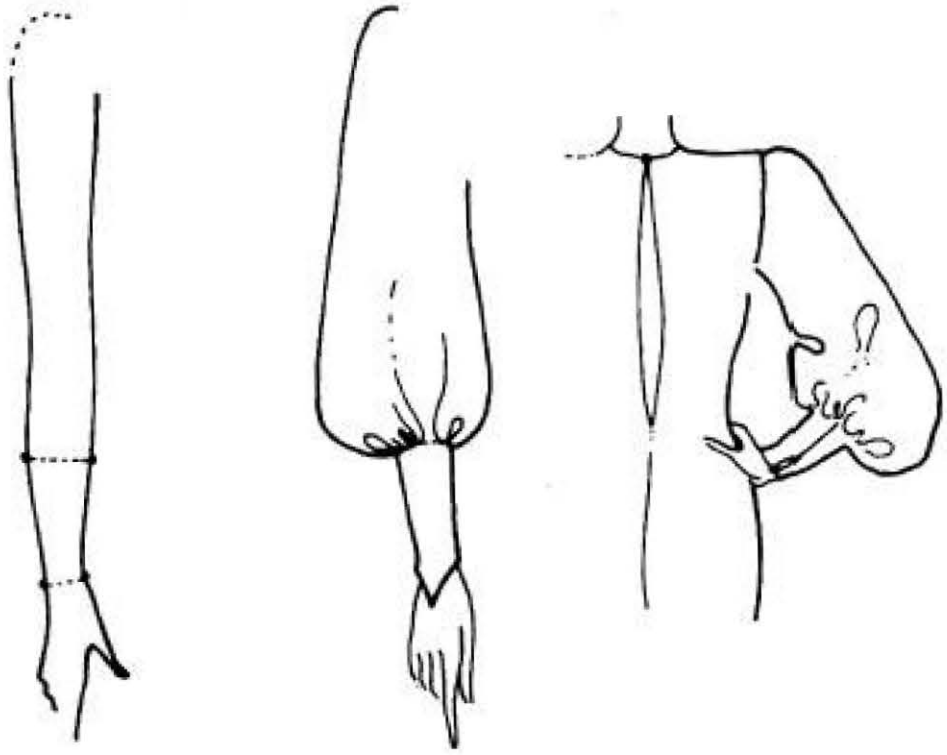


Figure 25. Tight fitting cuff.

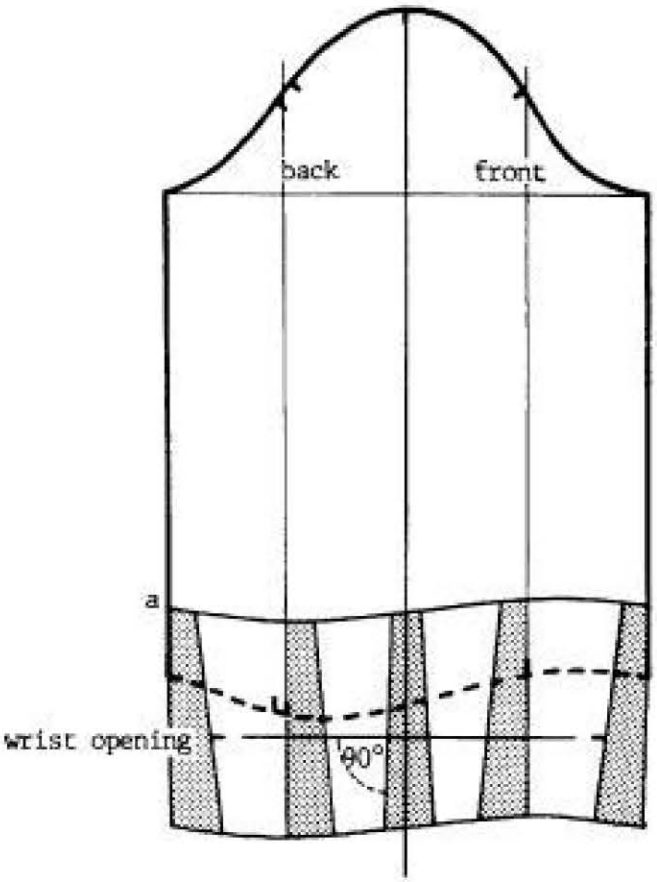


Figure 26A.

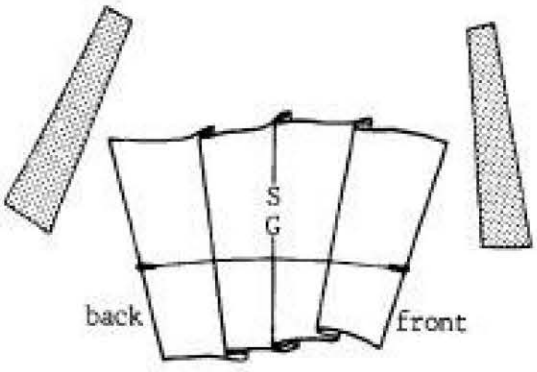


Figure 26B.

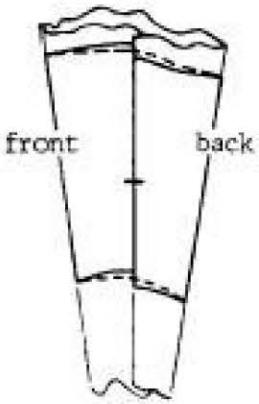


Figure 26C.

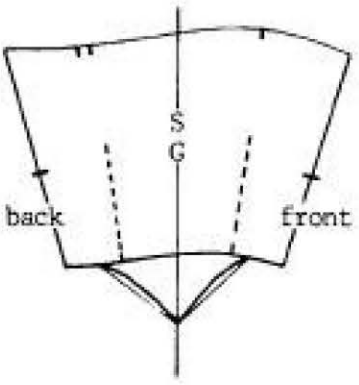


Figure 26D.

Pockets

Read the general comments on pockets in *More Dress Pattern Designing* page 116.

There are three main types of pocket:

Applied – as the name indicates, sewn on to the garment, usually with topstitching. Mainly patch pockets.

Structural – those forming an integral part of the design e.g. front-hip pockets. Also grown-on as with in-seam pockets.

Inserted – those inserted behind a slash in the garment e.g. welt and jetted pockets.

Good looking pockets are very dependent on accurate marking and sewing; this will be made easier if the patterns are well cut. Since pocket construction is so important, sewing details have been included.

Applied pockets, e.g. Styles A and B, are generally used on casual clothing in light to medium weight fabrics, but are also suitable for heavier weight fabrics (for coats and suits) when lined. Top corners may need strengthening during the sewing-on process. There are various methods of finishing the top edge, e.g. with a stitched down mock flap. When designed with an actual, separate flap these pockets then become suitable for rainwear.

Structural pockets, e.g. Styles C and D, are much used on skirts and trousers and on the hip area of coats, jackets and dresses. Neither Style C nor Style D is suitable for transparent fabrics unless the design contains sufficient fullness to conceal the inner pocket bags. The in-seam pocket, Style D, is invisible in wear when used in circular, gathered or full cut designs; this type of pocket tends to gape unattractively if used in tight fitting garments.

Inserted pockets, e.g. Style E, are inserted behind a slit in the garment. They are used mainly on tailored garments where the neatest possible appearance is required. There are three main types of inserted pocket – the welt, the jetted or bound pocket, and a welt pocket with a flap. The latter is the only one suitable for rainwear.

Style A – Pleated Patch Pocket with Flap

Method

Refer to Fig. 27

a. Decide on finished size of pocket. A more balanced look will be achieved by cutting pocket long instead of square, especially if a flap is required which will hide the top of the pocket anyway.

b. Add the pleat section to each side of the pattern, folding it to try the effect.

c. **Draft the flap pattern** which should look proportionate with the size of the patch. The flap should be cut wider (by approximately 0.5 cm on light to medium weight fabrics, but 1 cm or more for medium to heavy weight fabrics) so that it covers the ends of the patch when stitched in place.

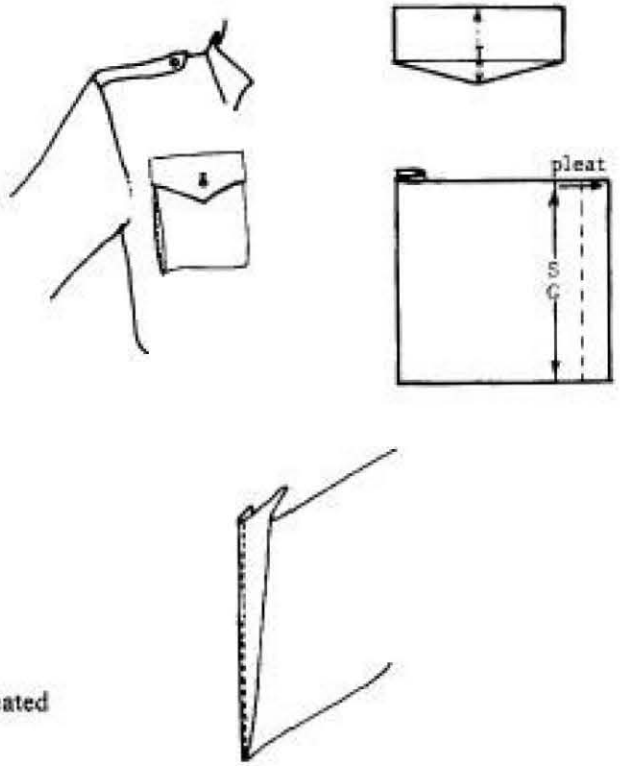


Figure 27. Style A – Pleated patch pocket with flap.

Style B – 'Bellows' Pocket

Method

Refer to Fig. 28

a. Decide on finished size. Draft a rectangle accordingly (pattern piece no. 1).
b. Decide on depth of pleated section around pocket (in this case it is 3 cm). Draft pattern piece no. 2, *the outer edge of which must be the same size as pattern piece no. 1*. (These are sewn together.)
c. Draft pattern piece no. 3 directly from no. 2, but remove 0.5 cm from all around the outer three sides. These edges attach pocket to garment and if they are to be hidden when pocket is pressed flat, then they must be slightly smaller all round.
d. Draft flap pattern as for Style A.

Order of assembly:

e. Join inner (rounded) edges of pieces 2 and 3, right sides together.
f. Join outer (square) edges of pieces 1 and 2, right sides together.
g. Apply pocket to garment i.e. on square edge of piece no. 3, topstitching in place.

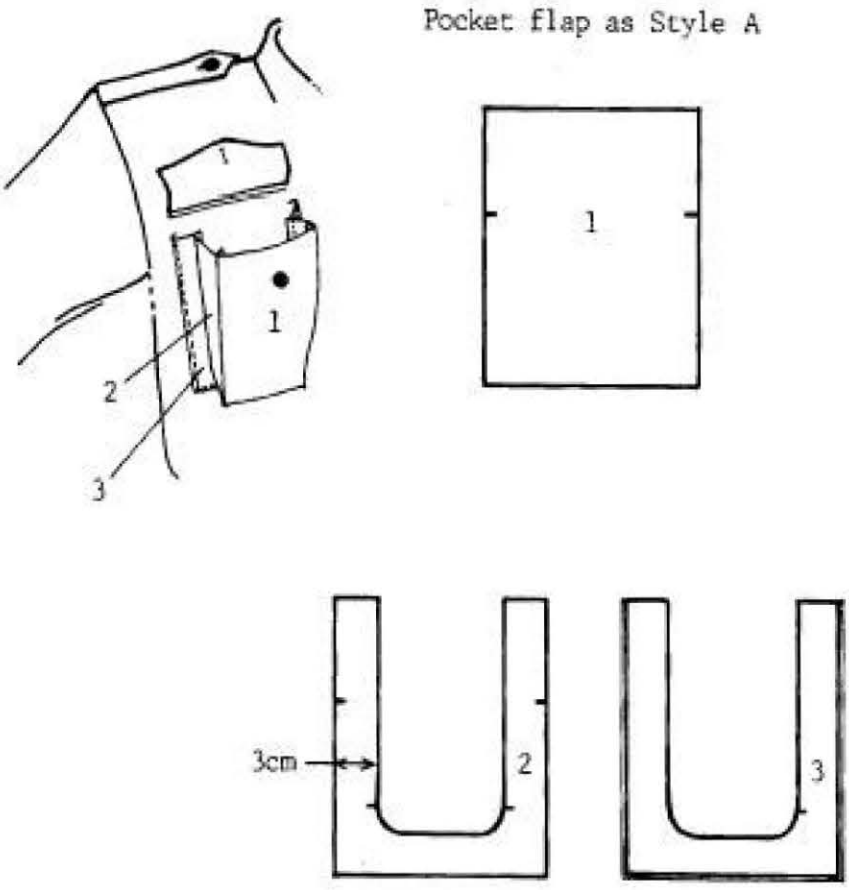


Figure 28. Style B – Bellows pocket.

Style C – Front Hip Pocket

Method

Refer to Fig. 29

a. Plan pocket shape and depth. **Trace under pocket bag pattern** from plan. Include Straight Grain Lines and balance marks at A and B for easy assembly; also those on rounded edge of pocket.
b. **Trace top pocket facing** from plan.
c. **Trim unwanted corner** from skirt pattern. Add seam turnings throughout.

Order of assembly:
Refer to Fig. 30

d. Join top pocket facing to skirt, right sides together. Clip seam on curve. Press. Topstitch if required (Fig. 30A).
e. Join rounded edges of pocket matching balance marks, right sides together. Neaten edge. Join side seams of skirt (Fig. 30B).

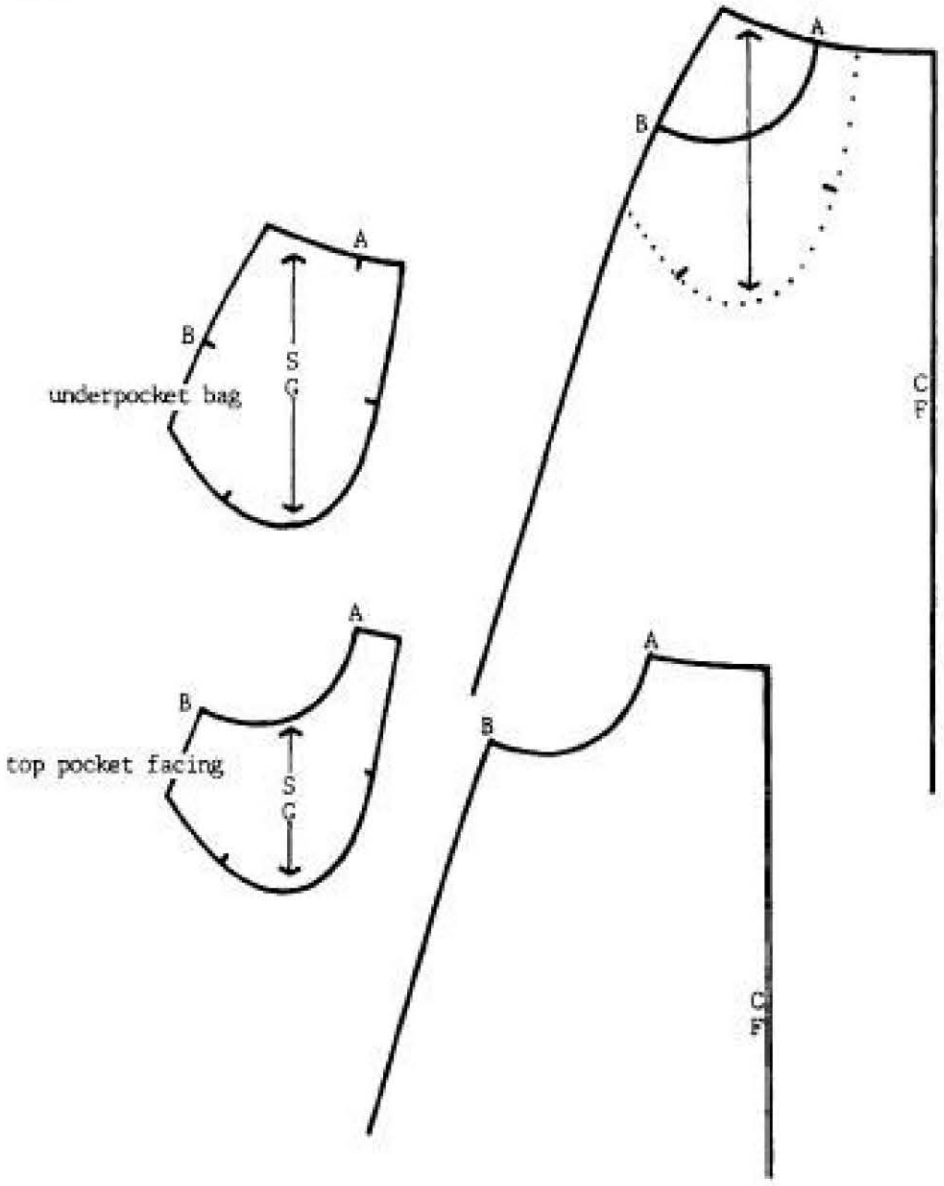


Figure 29. Style C – Front hip pocket.

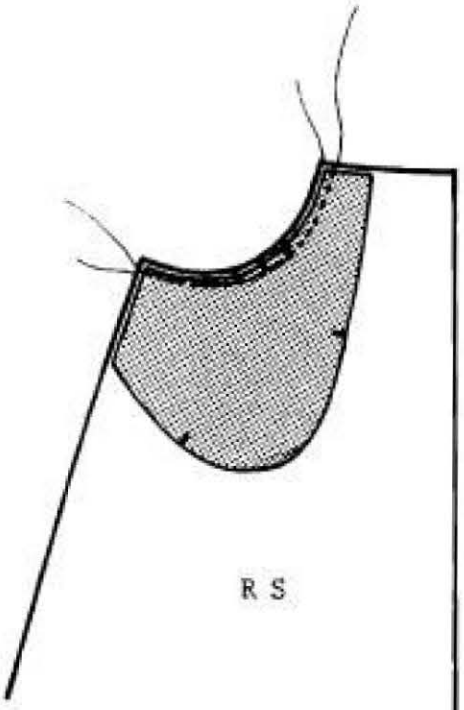


Figure 30A.

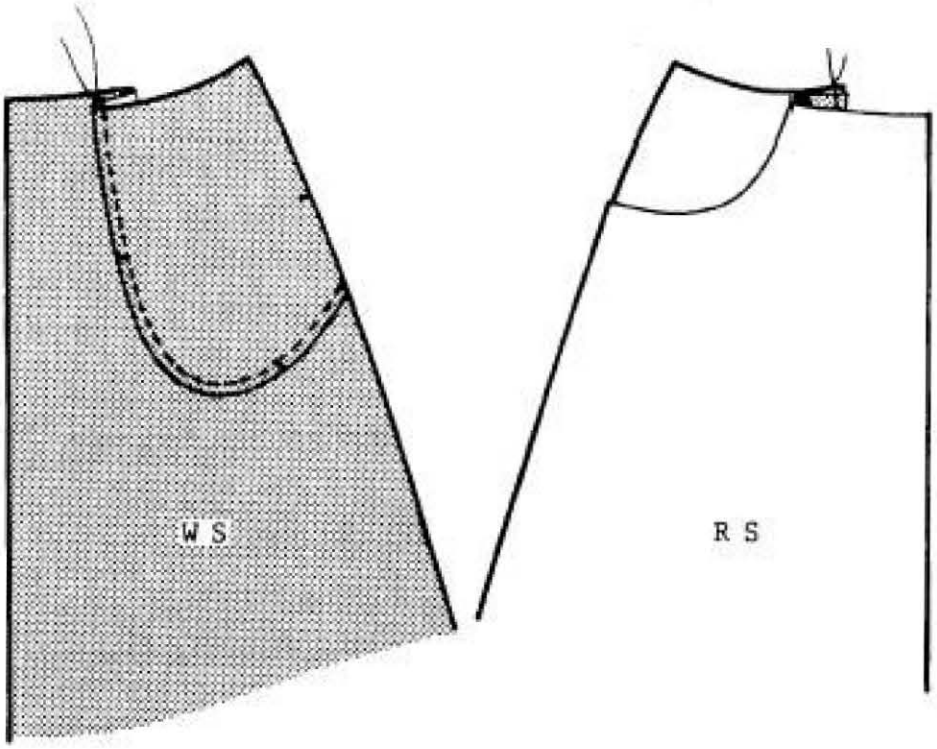


Figure 30B.

Style D – In-Seam Pocket

Method

Refer to Fig. 31

a. In this instance, on a skirt, the pocket is planned on a level where it can be used comfortably i.e. starting 10 cm down from the waist. Plan position and size of pocket bag by placing centre front skirt panel on the body as if in wear and place hand appropriately on pattern. Draw round the outline and then duplicate this on opposite side of seam. *The shape of the bag is important*; it should extend well below the bottom sewing point so that small items do not fall out. Place balance marks as shown. Repeat for side panel. Add seam turnings.

b. The in-seam pocket may also be cut with a separate pocket bag, which is often more economical (lining may be used). A 3 cm wide extension will ensure that the pocket bag seam is well out of sight.

Order of assembly:
Refer to Fig. 32

c. Sewing the pocket bag is a simple procedure. **Back-stitch the corners to strengthen them. The only critical** area occurs when the *skirt seams are pressed open* as in Fig. 32A. In order to release the back pocket bag so that it may lie towards the front, clip the *side panel seam turning only* into the corner.

d. *Skirt seams pressed together* are a particularly suitable method of construction for these pockets, as clipping into the corners then becomes unnecessary (see Fig. 32B).

Note: In the case of separate pocket bags, the seam joining these to the skirt extension should be pressed open in heavier weight fabrics, but may be pressed together in lighter weight fabrics.

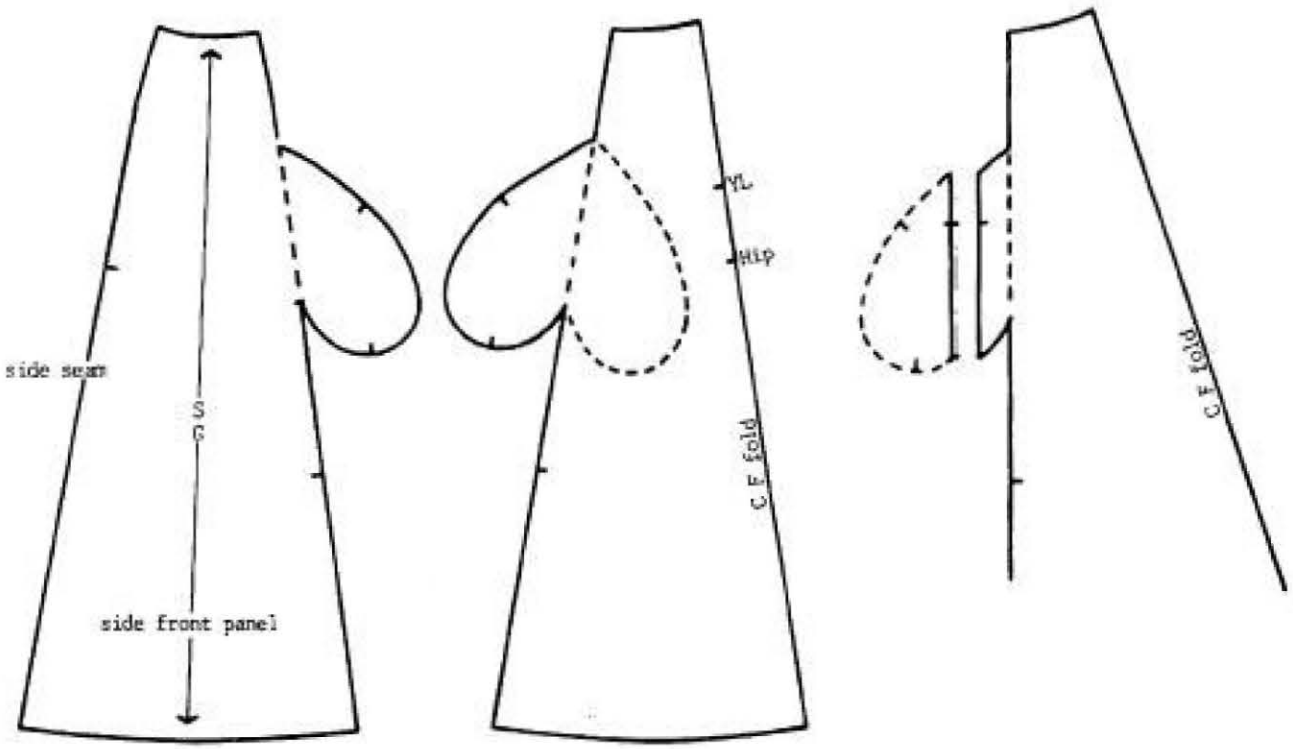


Figure 31. Style D – In-seam pocket.

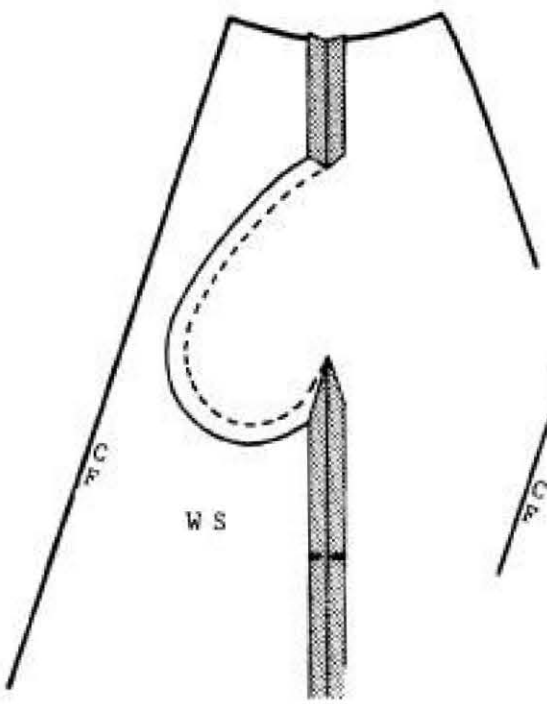


Figure 32A.

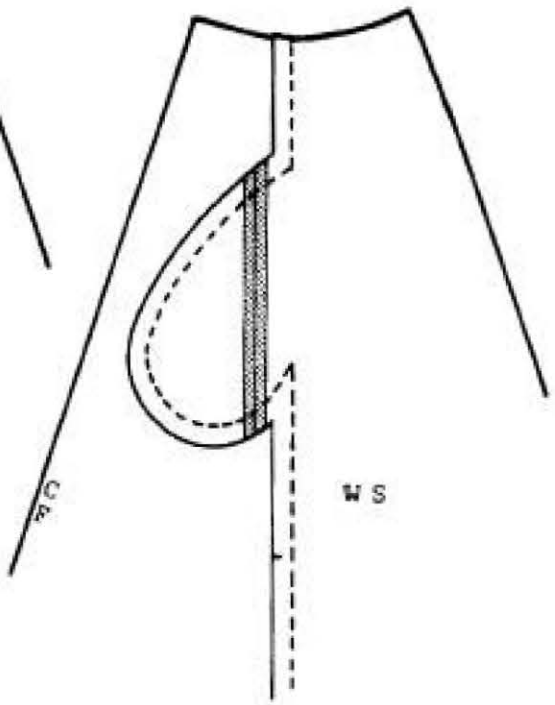
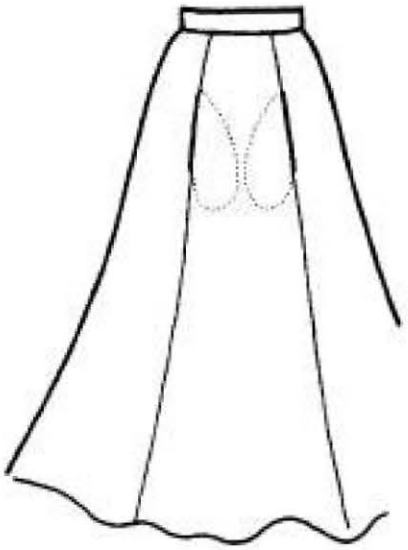


Figure 32B.



Style E – Welt Pocket

Method

Refer to Fig. 33

a. Make pattern for welt; length as required × twice the depth. Make pocket bag pattern A: length as welt × depth as required. Make pocket bag pattern B; 2 cm longer than A. Allow 1 cm seam turnings on all edges.

Order of assembly:

b. Fold welt in half with right sides together, sew ends, turn inside out and press.

c. Mark centre slitting line on right side of garment. (There is little point in marking the actual stitching lines at this stage as they would be covered by welt and pocket bags, and in any case might show on the right side of garment when finished). (See Fig. 33C.)

d. Place raw edges of welt and pocket bag A centrally on top of slitting line (in direction of garment hem), and pocket bag B touching raw edges of pocket bag A. Mark sewing lines 1 cm away from raw edges. (Notice that top sewing line is shorter than the lower by 3–4 mm at each end. This ensures that inner pocket seams do not show at sides of welt in the finished garment.) Machine on these lines, backstitching at corners for strength. *Do not stitch across ends.* (See Fig. 33D.)

e. Turn garment to the wrong side. Cut centrally between stitching lines and diagonally into ends, stopping short by 1 mm. Pull both pocket bags through slit to wrong side. (See Fig. 33E.)

f. Position the triangular pieces at each end, pulling them away from the centre of the pocket, and stitch around bags catching them in at the same time. (See Fig. 33F.)

The welt ends may be topstitched in position working on the right side or, working from the wrong side of the garment, they may be hand stitched for an invisible finish.

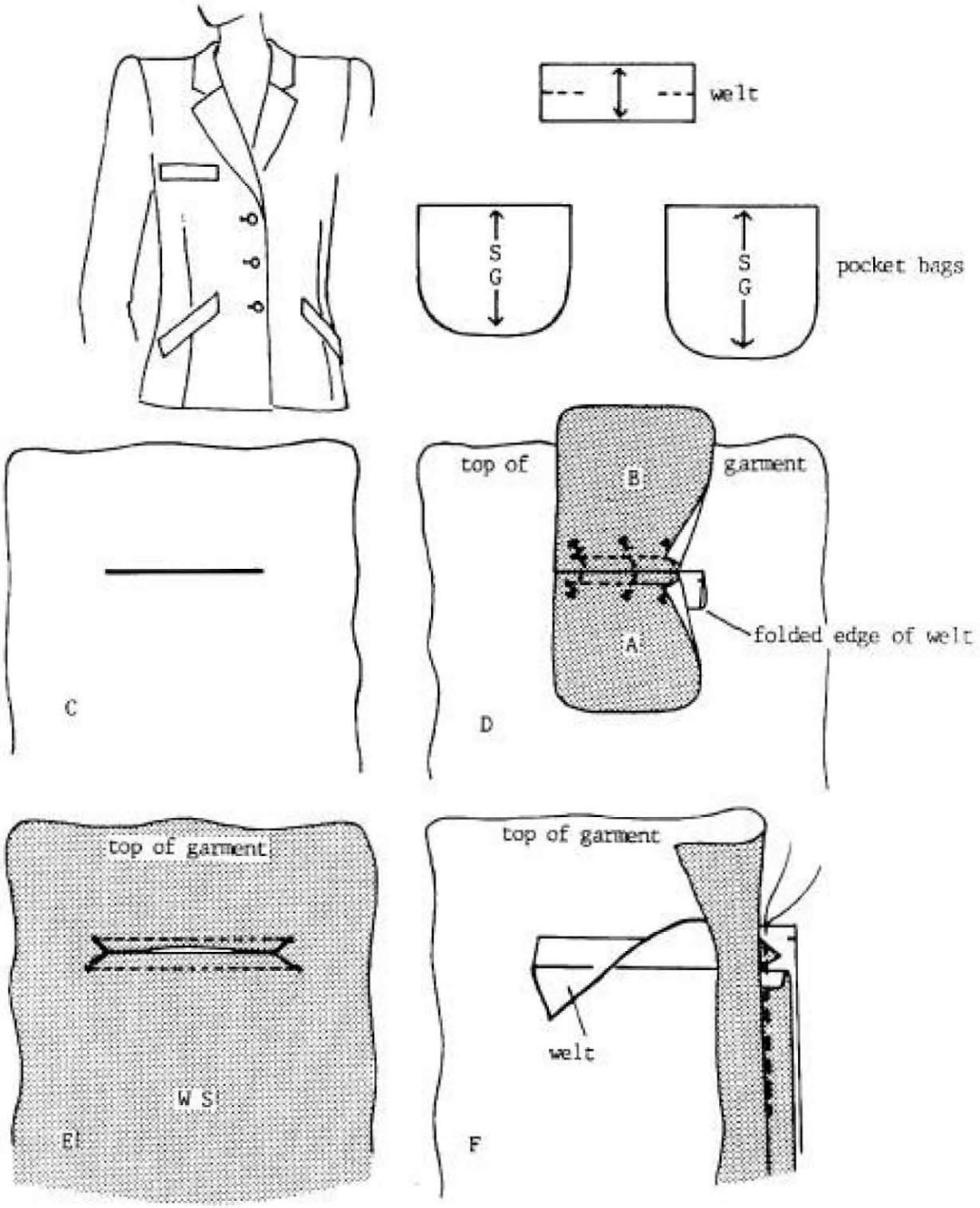
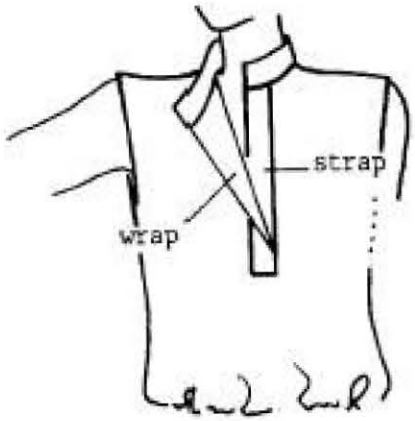


Figure 33. Style E – Welt pocket.

Wrap and Strap (or Placket) Openings

A wrap and strap finish is applied to garments which are not required to open right through, and therefore cannot rely on overlapping edges for closure. They are used mainly at the neck and wrist but can also be used anywhere on a garment where no seam exists and a wrapping finish is required. (The wrap is the topmost strip.)

Make sure that the opening is long enough for use. In the case of a neck opening, measure the head and add 5 cm for ease (this provides the minimum size). Halve the total and apply this from the centre back neck around the neckline to the shoulder point and then down to the centre front opening. *Try to avoid this point ending exactly on bust level.* The width of the wrap and strap varies with fashion, but it should also be suited to the fabric being used – the thicker the fabric, the wider the wrap. The end may be squared, pointed or rounded. If the neck is to be worn open, make sure that the facings are wide enough. These openings may be finished with topstitching.



Wrap and strap opening

Style A – Squared Wrap and Strap with Grown-on Facing

Method

Refer to Fig. 34

a. Plan width and length of opening on bodice. (In this case the Dartless Bodice Block has been used.) Mark sewing (dash) lines and then add 1 cm seam turnings.

b. When wrap and facing are perfectly straight, the pattern may be cut in one piece (or grown-on). Fig. 34 shows the left side or wrap and facing pattern which will also serve as the strap and facing pattern since in this case they are identical (the end being of the squared variety).

To make the pattern – Place a piece of transparent paper over the opening, leaving an area to the right large enough for the grown-on facing. Trace the whole of the wrap from sewing lines on bodice (include balance marks). Label right-hand side 'folded edge of wrap'. Fold on this line, flipping paper over, and from the fold trace back to left-hand sewing line and beyond to form the facing. Add seam turnings: 1 cm at wrap edge (to match bodice opening) and 2 cm at squared end (for easier handling when sewing).

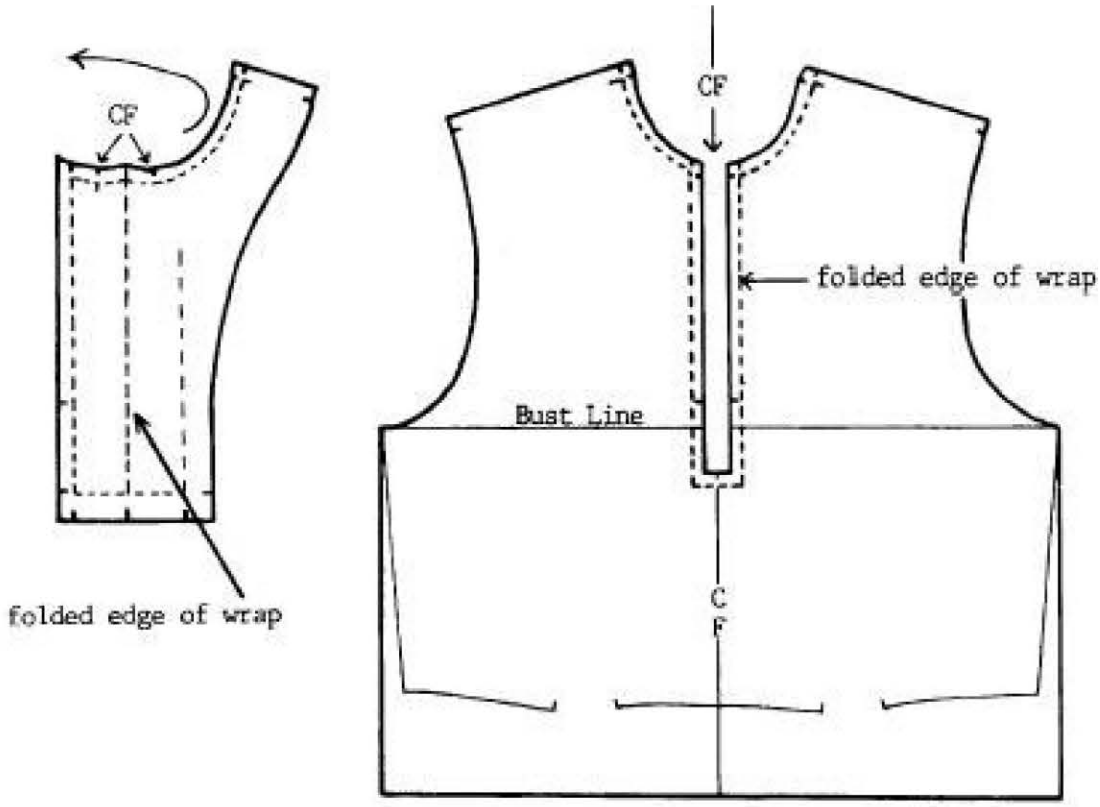


Figure 34. Style A – Squared wrap and strap opening.

Order of assembly:
Refer to Fig. 35A

c. Place right side of wrap to right side of bodice. Stitch down from neck, stopping and backstitching on a level with opening seamline on bodice. Complete both sides in this way. It is important that stopping points for both rows of stitching are *level and square*.

d. Turn garment to wrong side (see Fig. 35B) and carefully snip into corners; turn back to right side and press folded edges of wrap and strap into position. First tuck the strap inside the opening, then the wrap.

e. Flip up lower half of bodice and stitch across base of wrap, strap and bodice seam, making sure that all seam turnings are lying flat (see Fig. 35C). Extra care will be needed with this seam to ensure good square corners. Backstitching the corners will strengthen them.

Complete the neck area of the pattern with a stand collar, cut to the same width as the wrap (see page 85).

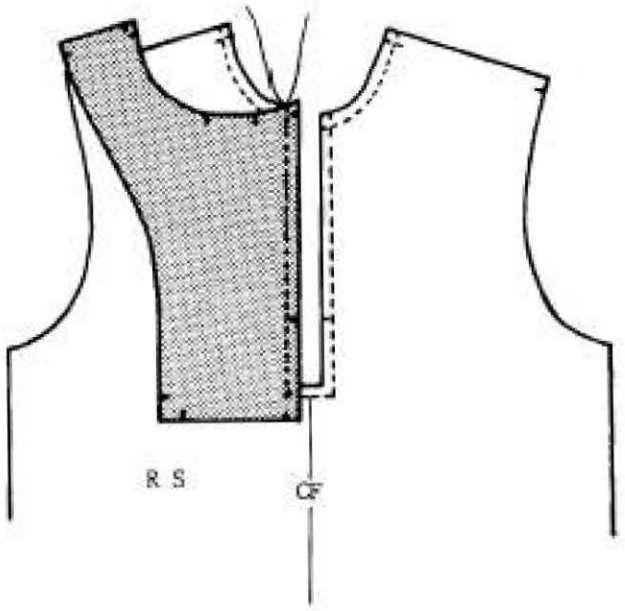


Figure 35A.

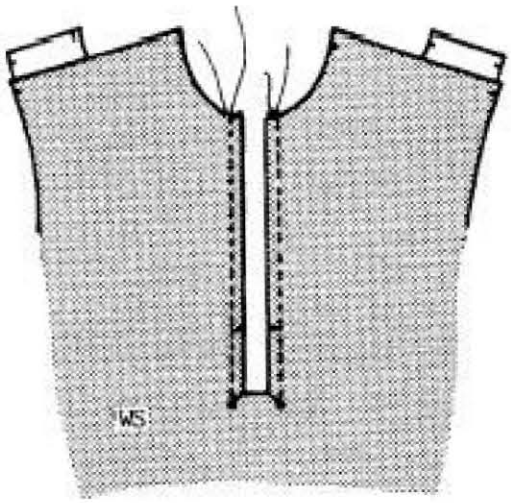


Figure 35B.

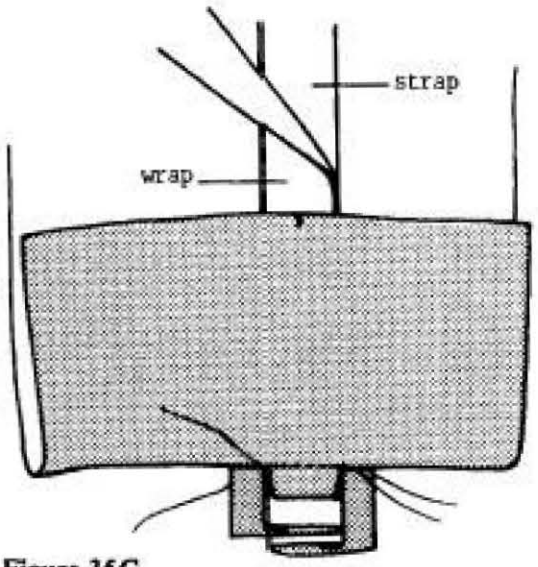


Figure 35C.

Style B – Combined Wrap and Strap Neckband with Separate Facing

Method

Refer to Fig. 36

a. Outline the *complete* front Dartless Bodice Block and the back, which does not need to be doubled. Place the shoulders together. Decide on depth of neckline at CF (which will also become crossing point of opening). The neckline may be widened at shoulder seam by 2 cm or as required. (These neckband styles are more flattering if cut away from the neck slightly, especially in lighter weight fabrics.) Draw a new neckline from a right angle at CB, to widened point on shoulder, curving it gently down to CF. Use the ruled line as a guide. Mirror the neckline for right front.

b. Decide on length of wrap and strap opening and on its width (in this case 3 cm). Draw the wrap outline parallel to and centrally over the CF line, blending it well into the new neckline. Complete the neckband by drawing a parallel inner line. Plan the buttonholes which are always placed vertically on wrap and strap openings. (The armhole band may also be drawn in at this stage.)

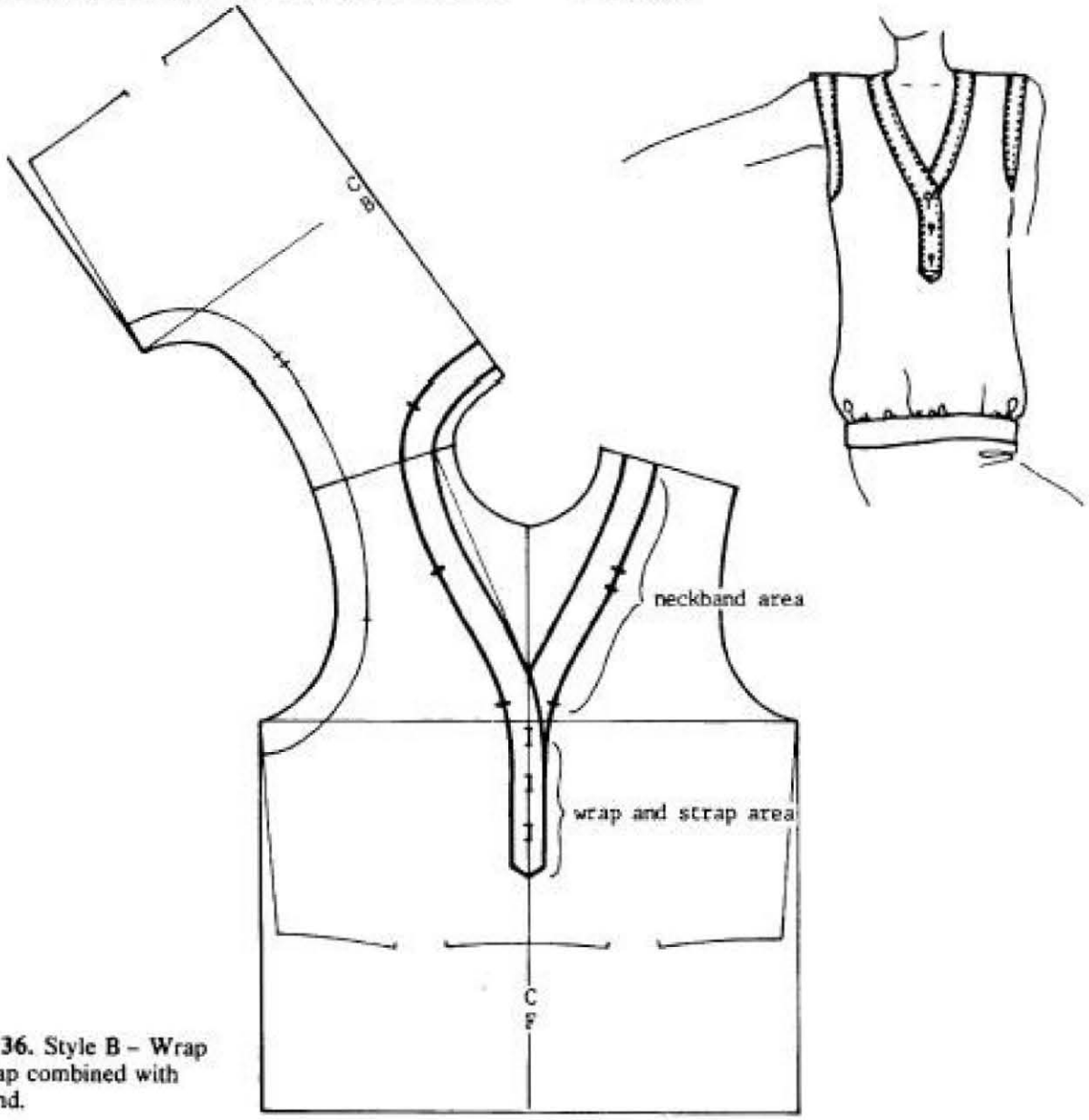


Figure 36. Style B – Wrap and strap combined with neckband.

Refer to Fig. 37

c. A *separate* pattern is necessary for each side of the neckband since they differ in shape at the bottom on account of the method of construction (see Fig. 37A). On *wrap side* trace the pointed shape directly from the plan, but on *strap side* square the end for easier construction. Place differentiating balance marks on each pattern. Add 1 cm seam turnings all round except at base of strap side, where 2 cm is allowed for easier handling and neatening later on. A pair will be cut from each pattern – one for the top layer of neckband and the other for the facing.

d. **The front and back bodices** may now be traced from the plan (use inner neckband line). Include the balance marks, which match those on the neckband patterns. Note that bottom of opening has been *squared across* for easier construction (see Fig. 37B). Label patterns with cutting instructions, *especially the front bodice with 'right side up'*, which indicates that each side of the pattern is not identical and must therefore be cut with the labelled side of pattern uppermost on the right side of the fabric.

Order of assembly:

e. Join shoulders of front and back bodice. Repeat with neckbands and with facings. Place right side of neckband to right side of facing, stitch the pointed end from A–B and continue up round neckline and back down to C (see Fig. 37A). Turn inside out and press.

f. Sew neckband to neckline of bodice matching balance marks and stopping and backstitching at points A and B. Turn to wrong side and carefully snip into corners (see Fig. 35B).

Refer to Fig. 38

g. Turn back to right side and tuck strap only into opening. Flip up lower half of bodice and stitch across base of opening seam, through strap and facing – 3 layers altogether (see Fig. 38A). Edgestitch bands now (see Fig. 38B). Finally, arrange the bagged out wrap point and edgestitch into position through all the layers, from A–B.

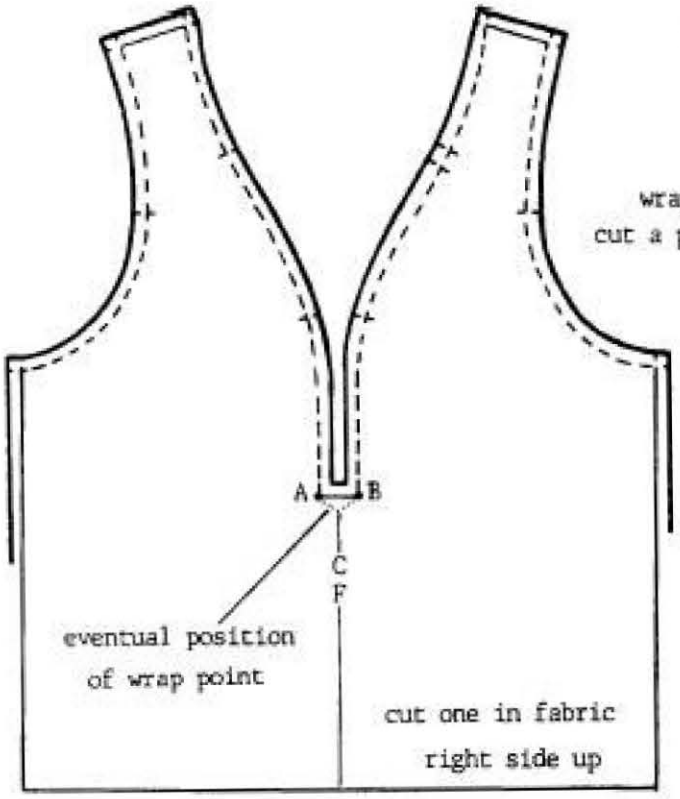


Figure 37B.

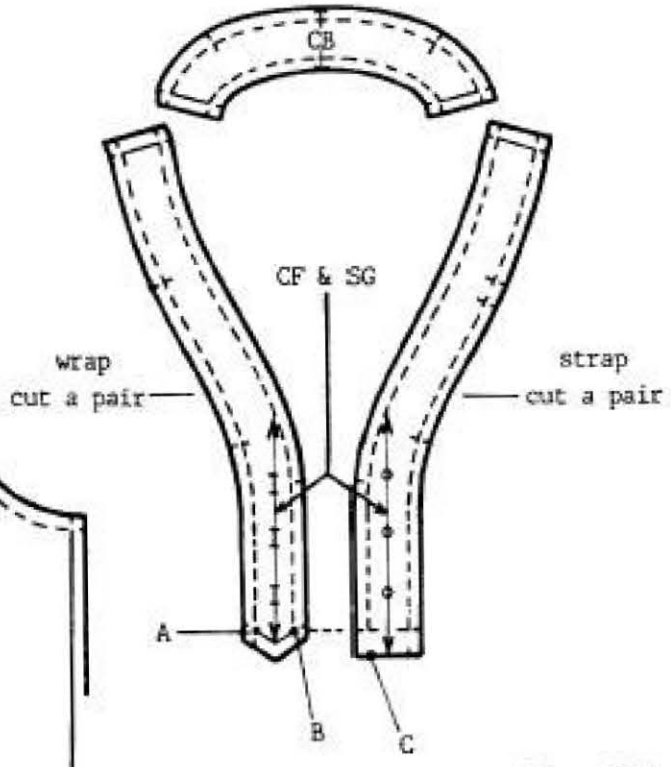


Figure 37A.

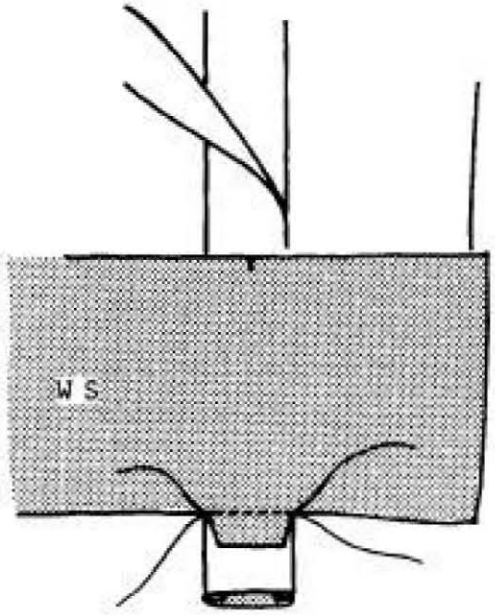
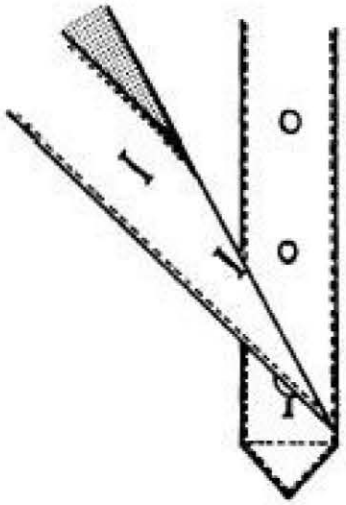
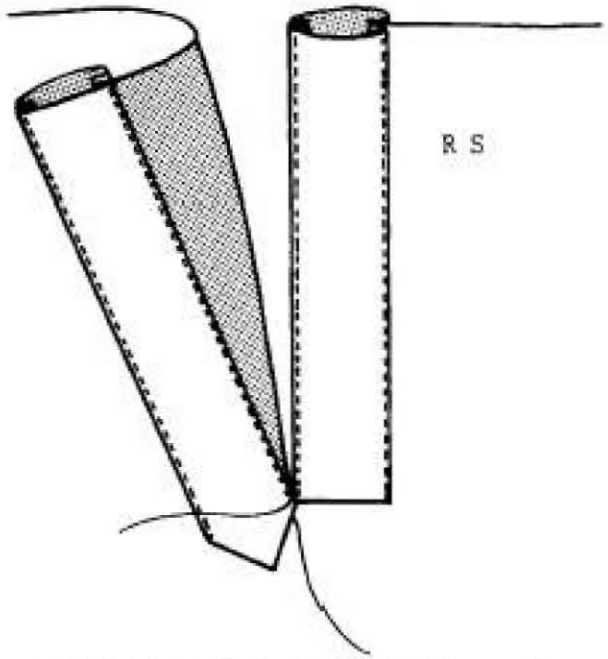


Figure 38A.





completion of edgestitching reserved until point is placed in position

Figure 38B.

Halter Necklines

Garments designed with halter necklines are usually close fitting in the neck area, especially if they are otherwise loose fitting – perhaps being a style without a waist seam and therefore relying mainly on the neck area for support.

When preparing a basic halter neckline from the Simplified Bodice Block (page 127) it will be necessary to remove some of the ease allowed over the body measurements, especially at bust level and at the front armhole to avoid gaping. There is approximately 8.5 cm ease allowed at bust level, and the block armhole is cut to take a sleeve and therefore has more room than is necessary for a halter style.

Adjusting the Simplified Bodice Block for halter styles

Refer to Fig. 39

a. **Transfer bust dart** from shoulder into front waist dart. This leaves the shoulder area free for designing the halter neck and produces a large underbust dart which would mould the bodice more successfully to the figure if it were curved rather than straight (see Fig. 39). These large darts are usually given seam turnings instead of the usual dart fold.

b. **The back waist dart** now ceases to serve a purpose since the new neckline comes below the top of the dart and it may therefore be folded out.

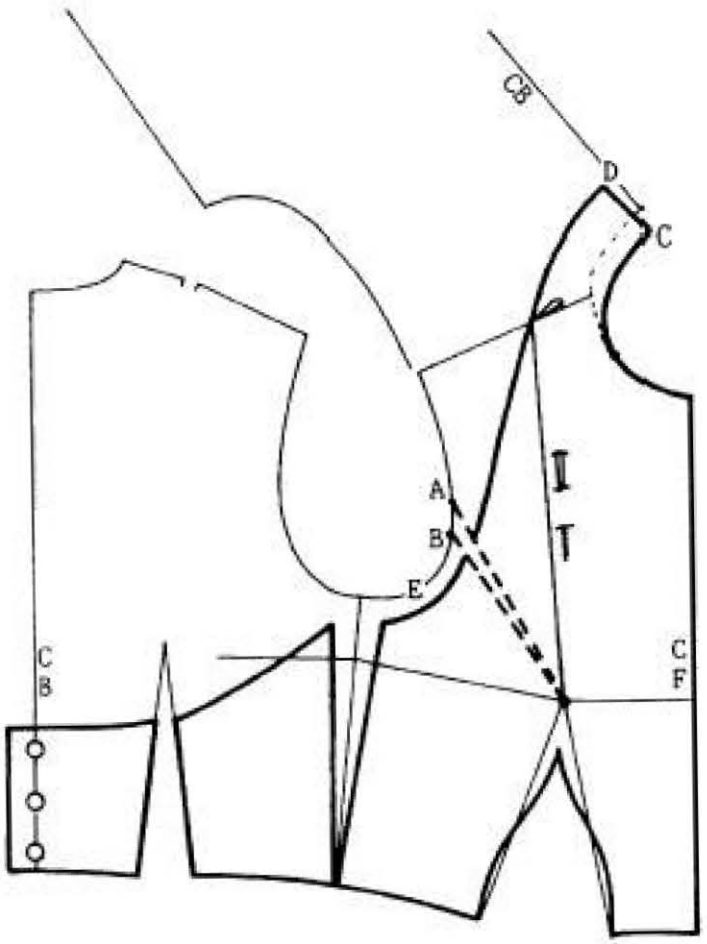


Figure 39.

c. A tightening 'dart' needs to be made in the front armhole to prevent gaping in an area usually cut loose enough to take a sleeve. Point A is approximately halfway round the armhole. Measure point B 2 cm down along the original armhole line. Connect A and B to bust point. This should be folded out and transferred into the underbust dart.

d. Remove some of the ease at bust level, in this case 1.5 cm on both back and front bodice side seams. This is a suitable amount for most firmly woven fabrics, but the amount should be increased for stretch fabrics. Connect these points down to the waist line. The side seam may then be eliminated and the bodice cut in one piece as in Fig. 40. *If you choose this course you must accept that the CB will be off grain.*

Extension of halter neck strap

e. Place the back block to the front with shoulders touching up to darts. Outline the back neckline and CB. These two lines serve as a basis for the halter strap, which should be situated centrally on the nape bone in order to support the main part of the bodice and to feel comfortable in wear.

f. Extend the back neckline 2 cm upwards at CB; mark this point C. Curve a new neckline from point C to midway around front neckline. The CB should be tightened to aid support; re-draw halter CB 0.5 cm in at point C and 1 cm in at point D. The strap may be any width, but 4–4.5 cm is a good average. Keep lines parallel around neck continuing in a good curve around to CB, according to design.

g. **When re-drawing the 'armhole' area** it is advisable to miss the original block curve (particularly in the area below the 'armhole dart', indicated by E) by a minimum of 1 cm, or uncomfortable tightness could result.

If buttons are required at CB waist and neck the appropriate button extensions should be applied, and finally the facing may be cut in one piece as shown in Fig. 40. The back neck strap area can, of course, be extended to form ties if a bow is required.

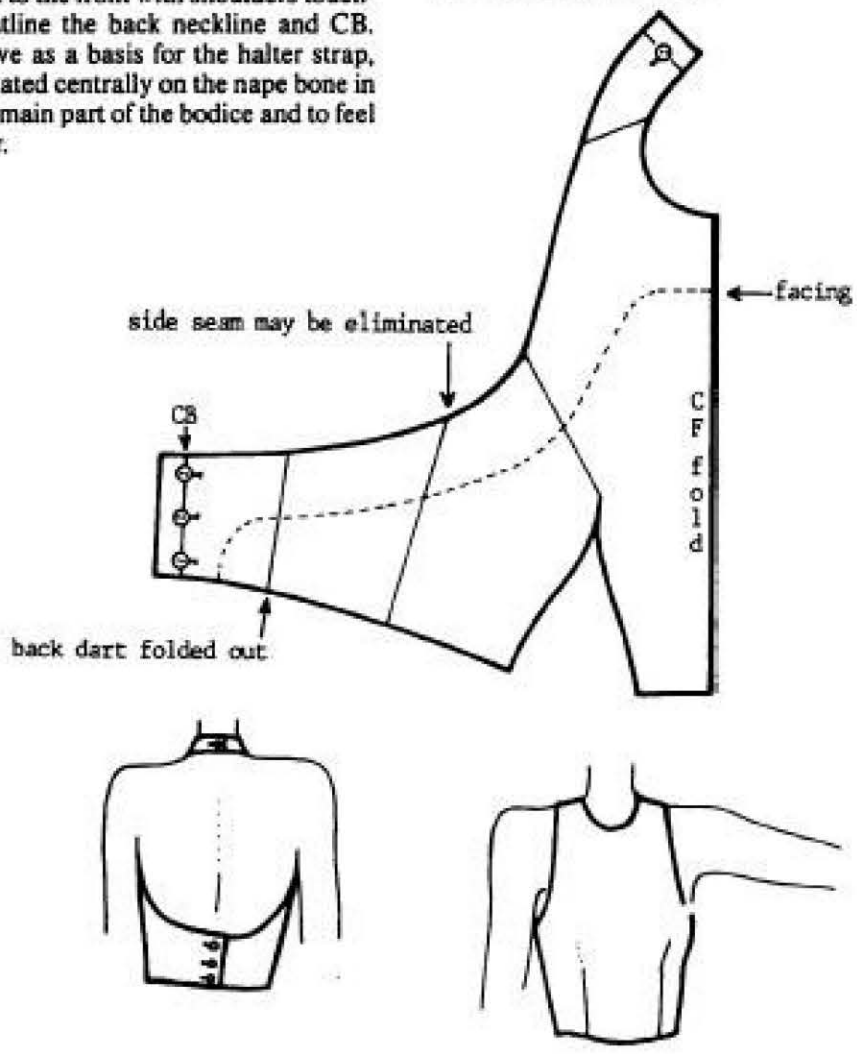


Figure 40. Halter neckline.

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